The Journal of the American Medical Association

Published under the Auspices of the Board of Trustees

VOLUME LII CHICAGO, ILLINOIS, FEBRUARY 20, 1909 NUMBER 8

Original Articles

CONCLUSIONS FROM 1,087 CONJUNCTIVAL TUBERCULIN TESTS BY A UNIFORM METHOD *

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The reports which form the basis of this contribution were obtained from forty physicians engaged in tuberculosis work, most of whom are clinicians, and to whom my acknowledgments are herewith made with thanks. The same preparation of tuberculin was furnished to all, together with an eye-dropper graduated to 0.25 c.c. The material was obtained from 500 c.c. of old tuberculin (human) precipitated with alcohol and redissolved in normal salt solution when sent out from the laboratory. It had been filtered through a thick Berkefeld bougie and contained no dead tubercle bacilli or fragments recognizable by staining. Some preliminary tests which I made indicated that the percentage used by Calmette (1 per cent.) was dangerously strong, at least for this preparation. Hence the solutions were made 0.3 per cent. and 0.5 per cent. in sterilized sealed tubes and provisional directions given to begin with the weaker and repeat it in the other eye with the stronger if no reaction occurred to the first instillation. It was considered a contraindication to the employment of the test if any eye disease existed. To the use of a small measured drop, weak, sterile solutions and the observance of contraindications may be attributed in part the rarity of severe or prolonged reactions and sequelæ. But one instance of keratitis has been reported, and that in a scrofulous subject who recovered completely without opacity. The reports herein contained do not comprise all[1] the tests made with the same preparation of tuberculin, but a request made to those clinicians who were unable to report their tests in detail for a report of any injurious effects noted has not produced any further cases. Six hundred additional tests were cited without resulting injury, 100 being on infants.

Practically all of the tests were made within three months of the date when the solutions were prepared, and no deterioration in strength was noted except in some tubes kept six months. It is probable, however, that some reactions failed to appear from this cause.

SUMMARY OF RESULTS

In the following tables are presented the results as collated from record charts sent to all the recipients of the tuberculin. They include 887 individuals, in 190 of whom a second instillation was made in the opposite eye and 10 in the same eye, a total of 1,087 instillations.[2]

There were 310 cases of tuberculosis in some form, 265 suspected tuberculous, 127 subjects of other diseases and 185 supposedly healthy subjects. Doubtful reactions are excluded from the tables.

TABLE 1.—SUMMARY

Pulmonary Tuberculosis.	No. Cases.	+ Reactions.	Per cent.
Stage I.—Incipient.			
Tb. bc. demonstrated.....	33*	20	60.6
Tb. bc. not demonstrated.....	49	35	71.4
Total	82	55	67
Stage II.—Moderately advanced.			
Tb. bc. demonstrated.....	96†	76	79.2
Tb. bc. not demonstrated.....	22‡	13	59.1
Total	118	89	75
Stage III—Far advanced...	36	18	50
Clin. healed	24	17	70
Other forms of tuberculosis..	50**	39	78
Grand total	310	218	70
Pul. Tub. suspected.....	219	73	33.3
Other forms suspected.....	46	22	47.8
Total	265	95	35.9
Other diseases	127	19	14.1
Healthy subjects unsuspected..	185	34	18.3

* Nine were under tuberculin treatment and failed to react.
† Nineteen were under tuberculin treatment of whom 10 reacted positively.
‡ One was under tuberculin treatment and failed to react.
** Eight were under tuberculin treatment of whom one reacted.

In reviewing the percentages in Table 1 it is apparent that a considerably greater number of patients with pulmonary disease reacted in the moderately advanced class than in the incipient, while in the far advanced the number of reactions was less. It is probable that the patients forming the moderately advanced class, being taken from sanatoria in the greater part, were in better condition than the hospital patients tested by Wolff-Eisner, who found a decreased percentage of reactions with the advance of the disease. The influence of tuberculin treatment in lowering the sensitiveness of the conjunctiva brought down the percentage of reactions appreciably. It is also noteworthy that fully 70 per cent. of persons who had been healed in the clinical sense from two to thirty years reacted positively. The chief interest relates to the clinically incipient (71.4 per cent. positive) and suspected cases (33.3 per cent. positive), in which the test would be expected to assist in diagnosis. The results fall considerably short of the requirements for an ideal diagnostic method in suspected tuberculosis, though relatively good in confirmation of the clinically tuberculous cases. The percentage of supposedly healthy subjects and patients with non-tuberculous diseases reacting positively closely accords

* A contribution from the Saranac Laboratory. Read at the International Congress on Tuberculosis, Clinical Section, Washington, Sept. 29, 1908.

1. They include the cases published by Drs. C. Floyd and J. B. Hawes 2d (Jour. Med. Research, 1908, xvii, No. 4) and also most of those reported by the writer of this paper in THE JOURNAL A. M. A., Dec. 14, 1907, xlix, 1969.

2. A few received a third instillation with another tuberculin.

with that found by Wolff-Eisner and Petit in a larger number of cases.

AGE DIVISIONS

Table 2 shows the age divisions and positive reactions. From this it will be seen that 15.2 per cent. were children under 15 years of age. The number of cases in the youngest and oldest classes is too small to give any importance to the percentage of reactions. The high percentage of positive results in the age division 10-15, is noteworthy, especially in the non-tuberculous diseases, when compared with the older classes. Probably no significance can be properly given to such small numbers of cases.

A history of tuberculosis in the family or of exposure to the disease was not fully reported, but in 62 suspected cases with family tuberculosis 50 per cent. reacted; of 35 healthy persons with like history 25.7 per cent. reacted.

SEVERITY OF REACTIONS

The grade of reaction severity was not recorded as fully as desired, although the schema in Table 3 was originally suggested for this purpose to the recipients of the tuberculin. The following meaning is to be understood from the signs:

\+ Distinct palpebral redness with secretion.
++ Ocular and palpebral redness with secretion.
+++ Deep injection of entire conjunctiva with edema of lids, photophobia and secretion.

TABLE 2.—AGE DIVISIONS

	Ages 0-10. No.	+ Reactions. No.	Per Cent.	Ages 10-15. No.	+ Reactions. No.	Per Cent.	Ages 15-40 No.	+ Reactions. No.	Per Cent.	Ages 40+ No.	+ Reactions. No.	Per Cent.	+ Total Reactions. No.	Per Cent.
Tuberculosis, all forms	29	8	40	26	24	92.3	238	162	68	39	24	61.6	218	70
Suspected	5	1	20	45	21	46.6	193	69	35.7	22	4	18.1	95	35.9
Other Diseases	16	5	31.2	16	7	43.7	73	3	4.1	22	4	18.1	19	14.1
Healthy	3	0	0	4	0	0	157	27	17	21	7	33.3	34	18.3
Total	44	..	....	91	..	....	661	..	....	104	..	....	..	....

TABLE 3.—SEVERITY OF REACTIONS

	+	++	+++	Prolonged Conjunctivitis.	Sequelæ.
Pulm. tuber. I—					
Tb. Bc. demonst'd.	9	11	3	.....	.....
Clinical	16	13	3	.....	.....
Pulm. tuberc. II.—					
Tb. Bc. demonst'd.	50	22	4	5— 5 days	.....
Clinical	11	1	1	.....	.....
Pulm. tubere. III.	12	4	2	1— 8 days	.....
Clinically healed.	14	5	1	1—10 days 1—12 days	.....
Other forms tuberc.	11	22	6	2— 7 days	1 keratitis (scrofulaged. 22)
Pulm. tuberc. suspected	48	14	1	.....	.....
Other forms tuberc. suspected	22	?	?	.....	.....
Other diseases	13	6	?	.....	.....
Healthy (unsuspected)	19	8	3	.....	.....
Total	225	106	24	10	1

Comment may be made on the fact that severe reactions were not confined to the well-marked tuberculous subjects, but occasionally were produced in apparently healthy persons. The strongest reactions, however, were more frequent in the first stages of tuberculosis. The small number (24) of very severe and (10) prolonged reactions has already been noted. Three severe reactions were accompanied by coryza in the corresponding nostril and constitutional symptoms — slight fever, malaise and muscular pains; one of these had a nosebleed.

REPETITION OF THE TEST

Repetition of the test in the same eye was recorded in 10 cases and in the opposite eye in 190 persons who had not reacted to the first test. All the first were tuberculous or suspected, so that little value can be placed on the reactions (which occurred in all) as indicative of acquired sensitiveness in hitherto uninfected subjects. The reactions to repetition in the same eye were, nevertheless, severe, as shown in the following table, and illustrate the heightened sensitiveness produced by the first instillation. The interval between the first and second instillations in the same eye was from two weeks to two months, which was sufficient for the creation of antisubstances.

TABLE 4.—SECOND INSTILLATION

	No.	+	++	+++	Per Cent.
Same Eye	10	1	2	7	100
Opposite Eye	190	29	7	0	18

Only 18 per cent. of the opposite eyes responded positively, nearly all of which were in suspected or tuberculous subjects and instilled within a week after the first test. The value of this method in increasing the percentage of reactions would seem to be relatively small.

INFLUENCE OF FEVER

The presence of fever was reported in 67 tuberculous and 25 suspected cases. Where the degree was noted only those of 99.5 F. and over are included in the following table. Mouth temperatures are to be understood.

It is apparent that the presence of fever does not diminish the chance of reaction, for even in the cases in Stage III, in which the highest fever prevailed, the percentage is the same as in Table 1 for the whole number. The same may be noted in the suspected class in which the subcutaneous test could not be employed in the presence of fever. On the other hand, the tuberculous of Stages I and II show a higher percentage.

TABLE 5.—INFLUENCE OF FEVER

Pulmonary Tuberculosis.—Stage I.	Cases.	Reaction +
Tb. bc. demonstrated	10	8
Clinically	10	6
Stage II.		
Tb. bc. demonstrated	22	21
Clinically	1	0
Stage III.	17	9
Other forms	7	7
Suspected	25	8

COMBINED CONJUNCTIVAL, CUTANEOUS AND SUBCUTANEOUS TESTS

The next table shows the results in the cases subjected to control tests. The cutaneous tests were usually made subsequent to the conjunctival and all the subcutaneous tests were thus made.

In addition four tuberculous patients were tested by the percutaneous method of Moro, with positive results in all.

Without mention of details as to maximum doses a full discussion of these tests is unprofitable. In many cases the reports were incomplete, but it is sufficient to note a fair correspondence between the reactions among the tuberculous and the larger proportion of reactions to the cutaneous and subcutaneous tests among the sus-

pected and healthy. So far as they go these cases confirm previous observations of the relative reacting power of the tests, but no data of value were brought forward as to the prognostic value of the conjunctival reaction. Among the tuberculous patients whom I tested no such regular correspondence between the degree of the reactions and the clinical prognosis was observed as found by Wolff-Eisner and Stadelmann except in the far advanced class. Among 90 patients of all stages recorded as favorable, only 67 reacted; of 11 doubtful, 9 reacted, and of 35 unfavorable, 29 gave a strongly positive reaction in most cases.

TABLE 6.—CONTROL TESTS

	Conjunctival.*		Cutaneous.		Subcutaneous.	
	Total.	Pos.	Total.	Pos.	Total.	Pos.
Tuberculous	23 31	11 13	23 ..	13 ..	.. 31	.. 18
Suspected	20 35	4 7	20 ..	10 ..	.. 35	.. 18
Other Diseases	2 9	1 1	2 ..	0 ..	.. 9	.. 1
Healthy	7 14	1 0	7 ..	4 ..	.. 14	.. 3
Total	141	38	52	27	89	40

* The conjunctival reaction appeared for the first time in 4 cases during the subcutaneous reaction and recurred in 2 cases at this time. Three of the first mentioned were suspected and the others clinically tuberculous.

The future history alone can show whether the conjunctival reactions among the apparently healthy subjects betokened a state of greater danger of the outbreak of active tuberculosis in them than to the non-reacting individuals. It is too much to assert on the basis of these experiments that only those healthy persons reacted in the eye who had a more dangerous infection.

The conceivable causes of non-reaction to the conjunctival test must be regarded in estimating its diagnostic as well as its prognostic accuracy, and the value of such a standard is impaired for the following reasons: 1, Uncertain absorption of the tuberculin, due to lachrymation and spasm of the eyelids which may squeeze out the drop; 2, smallness of the dose required for safety, it being insufficient to react all the known first-stage tuberculous individuals; 3, variations in individuals as to local sensitization acquired from tuberculous infections of equal amount.

By repeated instillations in the same eye, as practiced by Roepke and others with increasing doses, no doubt a majority of all infected individuals would react as with the subcutaneous test.

Apart from the danger to the eye it is by no means proved that uninfected individuals can not be sensitized in this way even if but slightly.

This naturally leads to the consideration of the value of any tuberculin reaction. The wide use of the conjunctival and skin tests during the past year has impressed many clinicians for the first time with their limitations. A positive reaction can not be interpreted as an infallible criterion of existing disease. It only betrays the presence of the infection; whether recent or long healed is to be determined by other means. In reality reactions which take place only to large or repeated doses are of little clinical value considered apart from other symptoms. The absence of reaction after such methods is of far greater value in excluding tuberculosis. In a general way no doubt the more marked and prompt the reaction and the smaller the dose, the greater is the probability of the presence of an active or recent infection. In this way the conjunctival test may help, but it is possible that with suitable dilutions of tuberculin the cutaneous test will be found to have the same value for adults as for children. There will then be no advantage in the use of either the conjunctival or subcutaneous method except that when it is desired to produce a focal reaction at the site of disease the latter would be required. It follows from these reflections that only positive reactions to very small amounts of tuberculin have much diagnostic importance in the presence of disease symptoms except where focal reactions can be observed, while only absence of reaction to repeated and large doses has any value in excluding tuberculosis.

DANGER OF THE CONJUNCTIVAL REACTION

The reports from physicians who have employed the method and observed the precautions at first promulgated do not speak for a great risk to the eyes, yet the fact that harm can be done is undeniable and, in my opinion, should banish the promiscuous use of the conjunctival test. When governed strictly by the indications as to the absence of past or present eye disease or scrofulous history and the use of weak solutions not repeated, the risk is very slight, but as a few cases of corneal injury in alleged healthy eyes have been elsewhere reported, no one should employ the test without a feeling of responsibility. As compared with the subcutaneous test any injurious results that may follow are less easily ascribed to coincidences, even if justly so.

CONCLUSIONS

1. The conjunctival tuberculin test performed with weak solutions by a single instillation has some value in confirming the presence of tuberculosis in the early stages.

2. It has little value in confirmation when the symptoms of tuberculosis are only suspicious.

3. Its value in distinguishing "active latent" from healed tuberculosis in apparently healthy persons has not yet been determined.

4. Repetition of the test in the same eye has no advantage over the cutaneous and subcutaneous tests in the percentage of reactions produced and may be misleading and dangerous.

5. Repetition in the other eye by the author's method offers so little advantage that it can not be recommended.

6. The conjunctival reaction is unreliable for prognosis.

7. Used with the proper precautions, danger to the eye is slight and need not preclude the test when other methods are inapplicable, as when fever is present. It should be restricted to adults, since the cutaneous test has been found equally valuable for children and is harmless.

8. The cutaneous test by the simultaneous use of dilute and strong tuberculin offers a method of detecting at once or excluding tuberculous infection with no danger or inconvenience. Experience is needed to show the value of this method.

9. The subcutaneous test should be restricted to those cases in which a focal reaction at the site of the disease is desired and when the other tests result negatively.

NOTE.—The following may be consulted on this subject:

Wolff Eisner, A.: Die Ophthalmo- und Kutan-Diagnose der Tuberkulose, Würzburg, 1908.

Petit, Leon: Le diagnostic de la tuberculose par l'opthalmoreaction, Paris, 1907.

Roepke, O.: Die Ergebnisse gleichzeitig angestellte Tuberkulinreaktionen, Beitr. z. Klin. d. Tuberk., 1908, ix, No. 3.

THE MUNICIPALITY AND ITS RELATION TO PREVENTABLE DISEASE *

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It affords me great pleasure to attend this convention, devoted to the consideration of practical problems of administrative science as they relate to the municipality.

It is particularly appropriate that North Carolina, the first state during colonial days to move for independence with all that word implies, should maintain organized effort of this character for the betterment of social, economic and hygienic conditions among her citizens.

As a member of the Public Health Service of the United States the problems of sanitation are of greatest interest to me, and it is, therefore, deemed appropriate, in response to your invitation, to outline briefly certain responsibilities and privileges of the municipality in its relation to the health of the country at large.

The health of the people of a country stands in the front rank of public considerations. On it depend their individual health and happiness, and ultimately the material prosperity and very existence of the nation itself. With the rapid development of our country and consequent growth of urban life, there have arisen sanitary problems of increasing complexity, and their solution is necessary in order that men may live and mingle together without being a menace one to another.

The occupant of the isolated country home has with apparent impunity been able to disregard many of the laws of hygiene respecting his habitation and surroundings, since he spends the greater part of his life in the open air, surrounded by the natural agencies which destroy effete matter and render it innocuous through biologic changes. Even in the open country, however, certain diseases, such as malaria and hookworm disease, flourish, causing excessive morbidity and great economic loss. The dweller in the city, on the other hand, is constantly forced to take cognizance of conditions that breed disease. In addition he is oftener exposed to the communicable diseases by reason of more intimate association with his fellow-men.

Through intelligent cooperation, however, urban residence has become more comfortable, and in many places the duration of life in the city has been prolonged over that in the country. These results on the part of the municipality predicate, first, the enforcement of efficient ordinances for the prevention and suppression of communicable diseases, and, second, the inauguration of sanitary measures which have for their object the abatement of nuisances detrimental to life and health.

Under modern conditions of city life the individual is himself unable to exercise the full measure of protection, and it is only through official agency that this can be accomplished. I believe that governments will eventually hold themselves responsible for preventable diseases and reimburse the individual accordingly. In fact, this provision in a measure exists in Germany to-day, where through national insurance laws partial provision is made for the wage-earner and his family during periods of illness. If any man in this audience contracts yellow fever in North Carolina it is because somebody has been careless. Such carelessness can be prevented by governmental agency, and the victim should not be made to suffer pecuniary loss in addition to the danger he is forced to undergo by reason of his affliction.

If the public had to pay a man because it allowed him to contract a preventable disease there would be more interest in preventive medicine and a more rapid advance in public health work in this country to-day.

PREVENTION OF COMMUNICABLE DISEASES A FUNDAMENTAL NECESSITY

The primary object of sanitation is the prevention of communicable diseases. The Surgeon-General of the Public Health and Marine-Hospital Service, through representations made to the Secretary of State and presented to the Third International Conference of American Republics at Rio de Janeiro, in 1906, emphasized this fact and declared that the sanitation of seaports would obliterate foci of infection and thus obviate the necessity of expensive quarantine and the restraints it imposes on commerce.

The prophylaxis of these diseases is becoming better understood, and that community is culpable which neglects to take cognizance of modern advances and to eliminate conditions within its borders which foster infection. Among the more important measures to this end may be considered the prevention of promiscuous expectoration, destruction of tuberculous sputum, and condemnation of insanitary dwellings; the prevention of soil pollution and consequent elimination of hookworm disease; the destruction of mosquitoes and eradication of their breeding places for the prevention of malaria and yellow fever; the thorough disinfection at the bedside of dejecta of typhoid fever patients; the vaccination of all persons within the first year after birth and again before the end of their twelfth year for the prevention of smallpox; the registration of statistics of sickness and death; the humane isolation of cases of communicable diseases; the sanitary supervision of food and water supplies, and the hygienic disposal of sewage and wastes.

"DO NOT SPIT ON THE FLOOR; TO DO SO MAY SPREAD DISEASE"

The influence of tuberculosis on the hygienic and economic welfare of the community and state is becoming more and more recognized.

In the United States alone 150,000 persons die annually of the disease—more deaths than have resulted from all the epidemics of yellow fever in our country during the past 115 years. Statistics were quoted by the Secretary of the Treasury at the opening of the International Congress on Tuberculosis in Washington, September last, showing that during the last four years tuberculosis caused more than three times as many deaths in our country as occurred in action and from wounds received in action during the entire period of the Civil War.

Such facts are of great significance and have contributed to the recent sanitary awakening with respect to this disease. The movement against tuberculosis is now world-wide in extent, as was shown by the international exhibit recently held in Washington. This exhibit also demonstrated the utility of modern methods of control; but for their perfection and practical execution state and municipal activity are indispensable.

Through such activity the mortality from tuberculosis in the city of Boston has been reduced 55 per cent.

* Presented before the Municipal Convention of North Carolina, Charlotte, N. C., Nov. 17, 1908.

within the past twenty years—a result that plainly indicates what may be done by other municipalities.

I believe that the future attitude of municipalities in the struggle against tuberculosis will be taken as an index of their sanitary enlightenment, and I would urge that every municipality participate in this campaign, the extent of which is now remarkable. In this work private philanthropy has been an important factor; but in order to prevent duplication of effort and loss of energy, municipalities should maintain a wise oversight and utilize all private initiative to the best advantage.

Tuberculosis is directly due to promiscuous expectoration, insanitary housing and ingestion of infected food. Ten years ago the cars and pavements of our cities were veritable spittoons. To-day, through anti-spitting agitation, they are reasonably clean passageways. The time is ripe for the enforcement of uniform laws and ordinances against the disgusting practice of spitting and other insanitary conditions which breed the disease.

Every child should be taught in the public school, "Do not spit on the floor; to do so may spread disease." Through the children we can hope to educate the fathers and grandfathers, thus exerting a favorable influence on the sanitation of our homes. Tuberculosis is a house disease, and authorities should see that insanitary dwellings are not allowed to continue as foci of infection and a menace to the community.

Defective ventilation should be absolutely prohibited, especially in houses offered for rent. I believe that the time is approaching when outdoor sleeping-rooms will be required, and when people will be forcibly prevented from smothering themselves in their own stale breaths. How better can tuberculosis be prevented when we know that pure air is practically a specific in its cure?

On the discovery of victims of the disease among the destitute it becomes the privilege and duty of the municipality to care for them and to prevent their becoming a source of infection to others. In the smaller municipalities sanatoria may not be feasible, but municipal dispensaries and house-to-house visits by the health authority can be maintained at slight expense. They are a valuable means of relief and offer an excellent opportunity for instituting necessary disinfecting procedures, which should invariably be required in all infected houses before their reoccupancy. In addition, they permit the spread of the gospel of pure air, pure food and right living—the most effective weapons in the warfare against tuberculosis.

DO NOT POLLUTE THE SOIL

Indirectly associated with conditions causing tuberculosis is the pollution of the soil. This latter practice fosters hookworm disease, a malady which is due to the presence of hookworms in the intestinal canal and which produces serious anemia, thereby predisposing to tuberculosis.

In the Philippine Islands the prevention of hookworm disease is regarded as the initial step in the solution of the tuberculosis problem, wholesale treatment of hookworm disease having recently greatly reduced the death rate of tuberculosis in certain limited areas.

Recent investigations made by Dr. Stiles, chief of the Division of Zoology of the Public Health and Marine-Hospital Service, in cooperation with the State Board of Health, have demonstrated the undue prevalence of hookworm disease in the sand districts of North Carolina. These studies have also emphasized the influence of this disease on the health and productivity of rural inhabitants and the consequent economic importance to the community at large.

There is no more fertile field in the sanitation of this state to-day than the suppression of this one disease, and it is incumbent on every infected community by law or ordinance to prevent soil pollution as well as to treat those individuals already infected. Treatment may be given by the establishment of dispensaries in each municipality, as is being done in Porto Rico, and at slight expense.

NO MOSQUITOES, NO MALARIA OR YELLOW FEVER

Malaria and yellow fever are propagated only by the mosquito, and the corollary, therefore, follows: no mosquitoes, no malaria or yellow fever. While the elimination of these insects presents a task the magnitude of which demands state aid, much also may be done by the municipality, as the yellow fever mosquito (*Stegomyia calopus*) particularly is domesticated and breeds only in artificial bodies of water, such as in cans, barrels, etc., found around habitations. In addition, mosquitoes do not voluntarily migrate any considerable distance from their breeding places.

It is, therefore, a part of good municipal sanitation to do away with such breeding places and to enforce efficient screening against both flies and mosquitoes, the former being also a known agent in the transmission of typhoid fever.

NO RATS OR FLEAS, NO PLAGUE

The rôle of insects and vermin in the transmission of communicable diseases is becoming more and more emphasized. Vermin and domestic animals have since antiquity been known to suffer with bubonic plague, and there can now be no doubt that the disease in rats is identical with that in man. Furthermore, these animals are responsible for the transmission of the disease to man.

During a tour of duty in Hongkong, China, it was my privilege to observe several striking illustrations of this fact. The observation was also made that in infected districts rat plague always precedes the disease in man and that the infection persists among rats for some time after human cases have ceased to occur.

In the fall of 1901 systematic examinations of rats, collected at random through the city of Hongkong, were made by me in company with Dr. Bell of the Civil Government Hospital, and it was observed that the disease lingered among rodents long after the last human case was reported.

Many facts indicate that an intermediary agent is responsible for the transmission of the disease from rat to man. Since then observations of Thompson in Australia have gone far to corroborate this belief, but it remained for the British Plague Commission in India to prove by a series of brilliant experiments that the rat flea *Pulex pallidus*[1] is capable of carrying plague from one rat to another. They also demonstrated that the closest contact of plague-infected animals with healthy animals, in the absence of fleas, does not give rise to the disease among the healthy animals, but that if fleas are present the infection will spread from animal to animal until all are infected. Animals placed in plague infected houses but surrounded by sticky fly-paper did not de-

1. Journal of Hygiene, vi, No. 4.

velop plague, while animals not so protected died of the disease. During these experiments many plague-infected fleas were captured on the fly-paper.

In view of these observations, there can be no doubt that in the transmission of plague the flea is the intermediary between rats and man.

With the view to determining whether the particular flea used in these experiments exists in seaports of the United States, investigations are being made by the Public Health and Marine-Hospital Service, and it has been shown thus far that such is the case in a number of municipalities.

While no case of plague has ever been reported in North Carolina, its consideration here is pertinent, as our country has twice been visited by the disease, and fifty-one countries have been infected since the present pandemic began in Canton, China, in 1894.

Such visitations of the disease are of national importance, and every municipal health authority should be on the lookout for its appearance and be prepared to institute preventive measures.

These, in brief, consist in the discovery of cases among rats or human beings, the depopulation and disinfection of infected houses or localities, the destruction of vermin therein, and the rendering rat-proof and sanitary all buildings occupied by human beings. By these means apparently brilliant results have been accomplished in San Francisco and elsewhere, and it is through them that further spread of the disease in the United States has been prevented.

TYPHOID BACILLI SHOULD BE KILLED IN THE BED-PAN

The undue prevalence of typhoid fever in the United States is a notorious fact, and its prevention is a duty devolving on every community. The infection is contained in the dejecta of typhoid fever patients and is most easily destroyed by disinfection in the bed-pan. It is the province of the attending physician to see that this measure of prophylaxis is observed, and he should be held responsible for its observance by means of ordinances properly enforced. In one city in Holland this all-important duty is performed daily under the supervision of the proper health official after due notification of the disease—an arrangement that might with advantage be adopted in the larger municipalities of our country.

In the absence of such precaution the infection may be transmitted by means of food, flies or fingers. Compilation of statistics made by Passed Assistant Surgeon Trask of the Public Health and Marine-Hospital Service during the past two years have shown that infected milk alone has been responsible for more than 500 epidemics of typhoid fever, scarlet fever and diphtheria within the past fifty years. It is necessary, therefore, that this universal food should be produced and sold only under competent sanitary supervision, and when such supervision can not be maintained, pasteurization should be the universal rule if we would preserve the lives of our infants and children.

Such supervision should include other foods capable of conveying infection, as well as water. It is a singular fact that our barbers and other tradesmen in many places are required to secure licenses to pursue their vocations, while our cooks and venders of foods continue their calling absolutely without sanitary restriction, although in repeated instances they have been proved to be living reservoirs of transmissible infection.

That typhoid fever is a communicable disease is well known, and studies carried on by Rosenau, Lumsden and Kastle in the Hygienic Laboratory of the Public Health and Marine-Hospital Service at Washington during the past three years have led to the conclusion that isolation of patients suffering with the disease is necessary to its eradication.

HUMANE ISOLATION OF COMMUNICABLE DISEASES NECESSARY

I purposely omit detailed reference to diseases such as diphtheria, measles and scarlet fever. Their dangers are well known, as is their method of handling. Besides, they are only unfortunate incidents in the life of the community as compared with tuberculosis, malaria, hookworm disease and typhoid fever, which constantly affect its health and prosperity.

With the advent of certain of these diseases, isolation of the sick becomes necessary in the interest of the public health, but this does not imply that they should be confined in a pest-house and undergo additional hardships because of their misfortune.

The very word "pest-house," as well as what it stands for, should be abolished. Patients should be cared for in a humane manner under authority of law or ordinance, and access should be had to comfortable isolation hospitals if the sick can not be properly isolated in their own homes. It is time that our people should take pride in their hospitals, clean alleys and well-ventilated houses rather than in public monuments, municipal buildings, etc.

In order to carry out isolation effectively, there must be prompt and accurate notification of the infectious diseases as well as causes of death.

MORBIDITY AND VITAL STATISTICS THE BOOKKEEPING OF SANITARY SCIENCE

There is no more urgent duty in the domain of sanitation to-day than the accurate record of morbidity and mortality statistics, which are the bookkeeping of sanitary science. They are the fundamental basis of all effective sanitation, and it is the province of local governments to insure their accurate collection. Notwithstanding this fact, the collection of such statistics in the United States has been exceedingly unsatisfactory, and to-day there are but fifteen states, seventy-eight cities and the District of Columbia included in the registration area.

The first law to my knowledge in this country for the registration of vital statistics was enacted in the colony of Virginia in 1631. In 1907 a bill for the registration of such statistics in the state of Virginia was defeated in the legislature—not a very brilliant commentary on the advance in sanitary practice during the past two and one-half centuries.

In North Carolina, on the other hand, provision in law now exists for the collection of morbidity and mortality statistics. Its enforcement is of vital interest to the state, and there can be emphasized before this body no more important measure from the standpoint of sanitary administration.

While the reporting of infectious diseases is a duty every physician owes to his community, it is the part of good municipal government to see that it is done, enforcing the law by means of penalties if necessary.

Provision also exists for the collection of vital statistics, and I would urge greater effort to render them

accurate. This duty devolves primarily on the municipality, but the state and the nation are also charged by law with their collection, and the state board of health should be provided with facilities to see that this duty is faithfully performed.

Both the state and municipal authorities should be sustained by public opinion and provided with adequate funds to carry on their work. This consists in the strict enforcement, in every community, of ordinances requiring burial permits before a corpse can be buried or removed. Such permits should be based only on a proper death certificate signed by the attending physician, and falsification or failure of record of either document should be a punishable offense.

The data thus accumulated are enduring records of the effectiveness of preventive measures and serve as a guide in the adoption of further necessary sanitary laws and ordinances.

THE ABATEMENT OF NUISANCES NECESSARY TO PREVENT DISEASE

As previously stated, the second great function of municipal sanitary administration is the abatement of nuisances, which have been defined as "whatever is dangerous to human life or health, and whatever renders soil, air, water or food impure or unwholesome."

From a sanitary point of view "none of us liveth to himself and no man dieth to himself," and this especially applies to the individual, his habits and surroundings as they affect the health and comfort of his neighbors. Community life, therefore, implies sanitary restraints, especially in regard to the disposal of waste products.

HYGIENIC DISPOSAL OF SEWAGE AND WASTES

With the installation of a modern sewerage system, an important phase of the problem has been met, as the individual's responsibility is assumed by the municipality. The construction of such a system is an engineering problem, but after the work of installation is completed the municipality must exercise authority over its operation in order that no part of it may become a nuisance. Then, too, the final disposal of the sewage must be accomplished in a manner to insure against the pollution of natural bodies of water.

The common law grants to riparian owners the rights to water from streams in its natural state. It may, therefore, be postulated that no man or community has the right to defile our rivers or lakes with sewage or wastes, and it is the duty of the state or federal government, depending on whether the waterway is intrastate or interstate, to prevent such pollution.

Municipal crematories and sewage disposal plants are thus made necessary, and the latter should be constructed so as to make use of septic tanks, followed by filter-beds or broad irrigation.

In the absence of a sewerage system, every householder must, of necessity, provide for the disposal of effete matter, but the method should be subject to sanitary regulation, and ordinarily he should have the choice of only two methods, viz., bacteriologic purification by means of the septic tank, or the pail system for slops and dry earth-closet for human excrement.

In the former, sewage is decomposed through the action of anaërobic bacteria, or bacteria which grow in the absence of oxygen, in a septic tank, and prepared for final oxidation, that is, the bacteria in the tank grow in the absence of oxygen and really cause putrefaction. The mass is decomposed and for the most part becomes liquefied. The resulting liquid is then allowed to flow over land or filter-beds when through the action of aërobic bacteria it is oxidized and rendered harmless. Such tanks are well suited for use in small towns and isolated houses, and a large number are now in operation in different parts of the country.

In the dry earth-closet system, the excreta are exposed to loam, or ashes, which, through biologic changes, cause complete disintegration of the effete matter and render it odorless and harmless to the community. With the use of this method, a separate receptacle must be provided for slops and kitchen waste.

The method to be adopted must depend largely on local conditions, and in any event sanitary supervision on the part of the municipality should be maintained.

In the sanitation of cities and towns as nearly uniform measures as possible should be practiced. A better knowledge of the modern principles of hygiene will eventually bring this about, but for their speedy adoption uniform laws and ordinances are indispensable, and it is through the agency of such organizations as this that unity of action and model sanitary laws might be secured. The question finally arises: Who shall exercise the necessary supervision and be responsible for the enforcement of all these health measures?

TRAINED HEALTH OFFICERS NECESSARY

In this and many other states, executive power in local sanitary matters has been delegated to the municipality, and in such matters the state health authority only acts in an advisory capacity. It is important, therefore, that each political unit be provided with a trained sanitary expert capable of advising with the mayor and enforcing existing health laws and ordinances.

In no other way will the public health problems of the country be met in an active and scientific manner. In this respect, our progress is unsatisfactory as compared with that of England, where every small town or county has a medical officer of health, who is a doctor of public health and possesses a knowledge of sanitary practice not required by the practicing physician.

In order that physicians may undertake this work with the view to making it their life occupation, it must be made more attractive through education of the public as to its necessities.

Public health officials, including municipal health officers, must in future be selected with the view to permanent service, and appointments should depend, not on political preferment, but on professional qualifications and executive ability. In the efficient discharge of his duties, a medical officer of health must possess these attributes in more than ordinary degree.

In the interest of the public health he may, of necessity, antagonize selfish interests, thus jeopardizing the comforts of himself and family. For these reasons his position should be secure, his removal should only follow dishonesty or inefficiency, and he should, whenever practicable, be relieved of the necessity of private practice.

There is increasing demand for further protection of the public health, and I believe that preventive medicine will eventually be practiced in much greater degree by municipal, state and federal governments.

To secure men capable of doing this work, provision must be made for advanced instruction in preventive

medicine. There is now practically no provision for such advanced study, and no institution in our country offers a course leading to the granting of the degree of doctor of public health.

A NATIONAL SCHOOL OF HYGIENE NEEDED

With the view to meeting this deficiency, a bill has been introduced in Congress to provide, among other things, for a national school of hygiene in connection with the Public Health Service at Washington. It is intended that the advantages of this school shall be available to health officers only, and that, on completing the prescribed course of study, students shall be given certificates testifying to such completion.

The bill has been passed by the Senate and favorably acted on by the Interstate and Foreign Commerce Committee of the House of Representatives, and it is fully expected that it will be enacted into law.

The establishment of this school of hygiene will encourage those best fitted to undertake public health work and bring about continuity of service in the field of preventive medicine. This provision will also insure closer cooperation between the national public health service and state and municipal health authorities and insure further uniformity of action in matters pertaining to the public health.

Unity of action is necessary in the struggle against disease, and it can be brought about only through efficient cooperation of existing national and local health agencies.

HOW, THEN, CAN THE NATIONAL HEALTH SERVICE AID STATE AND MUNICIPAL HEALTH AUTHORITIES?

The government of the United States is unique in that it blends national sovereignty and local self-government in such manner as to preserve the integrity of each.

While police powers with respect to sanitation within the states have been reserved to the states themselves, the national government is responsible for insanitary conditions affecting more than one state or territory, and in the exercise of its authority it can protect and aid local governments without usurping any of their powers or privileges.

As I see it, the cardinal duties of the federal government in conserving the public health are, first, the prevention of the introduction of contagious and infectious diseases from without as well as their spread from one state or territory to another; second, the investigation of communicable diseases, the conditions favoring their spread, and the methods necessary for their prevention; third, the dissemination of sanitary information thus acquired; and, fourth, cooperation with state and municipal health authorities for the protection of life and health. All these measures are of direct interest to municipalities, and their enforcement by the national government will result in improved municipal sanitation throughout the country. Provision now exists in law for the performance of certain of the duties outlined above, but additional legislation is necessary to enable the national health service adequately to meet the demands made on it in the interest of the public health.

At the same time there must also be granted more authority to state and municipal authorities if we would attain the standard of sanitary excellence which is to be expected of us.

In this address I have endeavored to point out the most important factors that operate against the public health. I have tried to indicate what the local authorities can do to prevent disease and to prolong life in the communities they govern.

The problem is a question of education. Men must be taught the necessity of sanitation and the dependence on it not only of the health, working efficiency and well-being of themselves and their families, but of the future prosperity of the communities with which they have cast their lot.

A community in which there is a low standard of public health can not escape race deterioration and with it an inevitable loss of industrial prosperity.

If the people are convinced by education of the importance of sanitation the barriers of prejudice and carelessness will yield and laws not only will be passed but, what is more important, will be observed.

What is necessary, then, is a propaganda founded on the basis of well-known hygienic facts and extended to every class of population. The active work in this propaganda must be pushed by the municipalities and local authorities whose representatives I have had the pleasure of addressing to-night.

THE PLANNING AND CONSTRUCTION OF HOSPITALS FOR SMALLER CITIES AND TOWNS *

MEYER J. STURM, B.S.
CHICAGO

The ever-increasing demand for hospitals has brought into existence a new specialty, that of hospital architecture. Those who follow this new branch of the architectural profession have not found their road an easy one, inasmuch as each individual who has had the direction of the building of a hospital has his fad or hobby to work into the general order of things. It may be safely said that there has not been a hospital planned in the last twenty years wherein there has not been something injected of these hobbies and foibles, which are expensive at best and often absolutely unnecessary.

The general idea, the initial thought for the planning, is practically the same for all hospitals—the greatest amount of serviceability at the lowest cost consistent with a first-class structure, and a minimum of fixed and maintenance charge for the maximum work to be done.

Primarily all hospitals are the outcome of something that has already been done. In this work much that is original has been introduced, and it is safe to say that not one hospital which is being built to-day but has some innovation which is the outcome of existing conditions, either good or bad.

This paper will deal with hospitals containing from 20 to 150 beds. It is a common error to figure the cost of a hospital by the number of beds it contains. The number of beds in any hospital is the index to the scope of the building, but does not in any way give an idea of its size. For instance, a hospital with but 2 wards, containing 10 beds each, would be a 20-bed hospital; but while it fulfills all the requirements of such an institution, its cost of construction, its maintenance and organization are wholly out of proportion to a hospital with 20 private rooms.

* Read before the American Hospital Association, Toronto, Can., Oct. 1, 1908.

Often, too often, the argument is advanced that $1,000 per bed is approximately correct for the calculation of cost of a hospital, but this is a fallacy.

Dr. A has a hospital in Allentown, of ordinary construction, containing all modern conveniences, and 20 beds, which cost $18,000 complete. Why, therefore, it may be asked, can not Dr. B build a hospital of 20 beds in Bennington for $900 per bed? But as a matter of fact Dr. A's institution contains 2 wards of 8 beds each and 4 private rooms, whereas Dr. B wants no wards, but 20 private rooms. Moreover, Dr. A's 2 wards, if divided, would make but 2 rooms each, which would mean that if his building were divided into the units that Dr. B requires he would have practically 8 private rooms, or 10 at the most, cost $18,000.

How, then, can we arrive at a basis for figuring such buildings so that there may be some uniform method of ascertaining their cost? No sliding scale or rule of thumb can be devised for this.

Recently, when I was planning a hospital for 150 beds, my attention was directed by those who were going to build, to the fact that a Masonic temple in the same town was about the size of the hospital being planned, and that inasmuch as the temple had cost but $150,000 the hospital ought not cost in excess of that amount, despite the fact that the latter was 6 stories in height, divided wholly into private rooms and suites with baths, and contained an unusual amount of plumbing, electric work and special contrivances, which probably amounted to six times that contained in the former. This hospital will cost, owing to advantageous contracts, about $1,000 per bed.

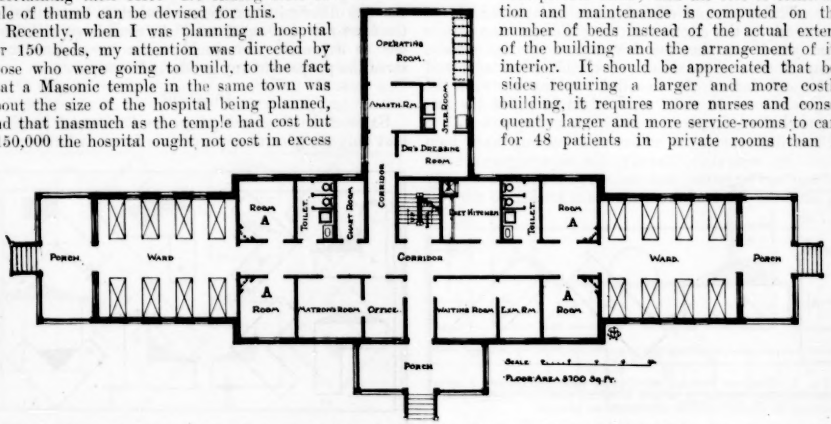

Fig. 1.—Plan of a 20-bed hospital, containing 2 wards of 8 beds each, and 4 private rooms. A 20-bed hospital with 2 wards of 10 beds each would shorten the building by eliminating rooms "A" and enlarging the 2 wards sufficiently for the 2 additional beds in each, giving a floor area in such a hospital of 3,400 square feet.

The only definite basis for figuring the cost of a hospital is to ascertain the number of beds required, private rooms and wards to house these, the extent of administrative rooms (by which is meant offices, diet kitchens, toilet- and service-rooms and servants' and nurses' quarters, if no separate provision is made for the latter); then decide what would be the best material or method for building, have preliminary drawings made, and figure the approximate cost. No architect or contractor, or even a hospital superintendent, however much he may have to do with the erection of such buildings, can answer the question, "How much will a 20-bed hospital cost?" or "How much will a 20-bed hospital cost containing an office, nurses' rooms and diet kitchen, 2 6-bed wards, or 3 4-bed wards and 8 rooms with the necessary rooms that go with them, 3 operating-rooms, etc?" A wide guess can be made, but there is such a difference of opinion as to what constitutes proper arrangement and size of rooms and the thousands other points, that it is practically impossible to determine the cost without more specific data. All this applies particularly to the smaller hospitals, for in the greater number of instances the idea of having a hospital precedes the obtaining of funds for its erection by so great a period that there is no basis for exact figuring at the outset.

I wish I could bring about a realization of these conditions. In each case there is an individual problem for solution, generally with no definite knowledge of what is entailed on the part of the founders. A hospital is ordered which shall contain 20 beds or 8 beds, or perhaps 150 beds with so many wards and so many private rooms, or all wards or all private rooms, some with private baths; and the cost of construction and maintenance is computed on the number of beds instead of the actual extent of the building and the arrangement of its interior. It should be appreciated that besides requiring a larger and more costly building, it requires more nurses and consequently larger and more service-rooms to care for 48 patients in private rooms than it would to care for the same number in 8 wards of 6 beds each.

There can be no difference of opinion on one point in the construction of hospitals, namely, the obtaining of the most in construction at the minimum expenditure. The single building is the best for this purpose for many reasons. The first requisite in planning a hospital is to make the building a basic unit so that while in itself it contains everything complete for such an institution, it shall be a nucleus for future enlargement without in the least disturbing the general arrangement.

In the latter would be included the administration department, the toilet- and service-rooms and the operating and kitchen departments.

PRIME REQUISITES

In a hospital of simple plan this could be readily accomplished by extending along the main axis. But, primarily, this basic unit should be built so that it fulfills certain fixed requirements as follows: 1, compactness; 2, the maximum of specific advantages in construction at the least cost; 3, the maximum efficiency in maintenance at the least possible cost.

1. Compactness can be obtained by building on a regular plan, superimposing stories of similar arrangement on each other, so as to economize plumbing and suiting the size of rooms and heights of ceiling to the needs of the hospital, basing the calculation for these on an intermediate rather than a minimum or a maximum.

2. Advantages can be secured at the least cost by the elimination of all unnecessary features which are usually adopted to "make a show" or, because some institution with unlimited means has these luxuries, to gratify a whim not at all in accordance with utility. I do not wish it to be understood that I advocate prison-like hospitals; but marble and tile walls and ceilings, costly woodwork, offices and elaborate board-rooms do not serve their purpose to any better advantage and probably not as well as neat, simple and homelike treatment.

3. The maximum efficiency can be attained at the least cost by the erection of the buildings on a simple plan which contains the first two requisites, namely, compactness and maximum of specific advantages and a conservation of the so-called working parts of the hospitals so as to make what might be called the mechanical plant simple in installation and operation.

The different items under this heading have been taken up separately, namely, the superimposed bath-rooms, service-rooms and toilets, the greatest facility in handling the food from the main kitchen to the diet

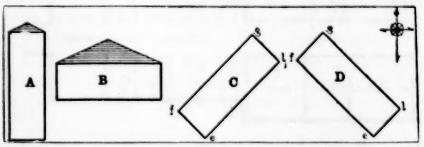

Fig. 2.—Diagram showing position of solid rectangular hospital building. The shading in A and B shows that the north walls of buildings so located receive practically no sunlight.

kitchen and from the special diet kitchen, the drug-room, the installation of the signal systems to expedite the work of nurses and attendants, and proper arrangement for the facilitating of the routine work; also the installation of the special apparatus on each floor so that each may be handled independently without the increase of labor or the necessity of large quantities of supplies.

This particularly applies to such apparatus as bed-pan sterilizers, warming closets and general preparation tables in service-rooms, linen-room and diet kitchen arrangements.

The organization of hospitals I need not dwell on at any length, as this subject has already been fully treated,[1] and it would be somewhat aside from the scope of this paper to give the many methods followed for such organization.

There is one subject which requires special comment. After the organization is perfected the selection of a building committee should be carefully considered. The fewer members there are on such committees the better the results in all particulars. A good working committee of three can accomplish considerably more than a larger committee, and if the chairman of such a committee is given discretionary powers to make all preliminary arrangements it is needless to say that this will expedite matters. The building committee of three can then take up the final arrangements and adhere to a definite system of developing the needs of the hospital for the present and for the future.

In general, it is a safe rule to follow that the time expended on preliminary plans should be sufficient to develop all of the ideas perfectly before the final plans are started. This will obviate the necessity for changes which are difficult to make as well as expensive, and will result in the completion of the plans and the consequent expediting of the erection of the building.

The specifying of materials for the building should be left entirely in the hands of the hospital expert, who in all instances ascertains the local conditions of both labor and material, and whose wide knowledge of the subject gives him the advantage of being able to make the fine discrimination between what is best suited at the least cost, and what would be considered as luxurious or expensive and would under no circumstances serve the purpose to any greater advantage.

LOCATION

So much has been said about the location of hospitals that only the general requirements for such location are

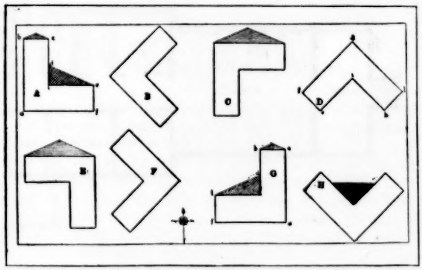

Fig. 3.—Diagram showing position of L-shaped hospital. Shading denotes degree of shade thrown on north sides of buildings.

given here. The larger the ground and the farther from the street that the hospital is placed the more advantageous is the location. The principles which have been laid down so often are that there should be: 1, an abundance of sunlight; 2, an absence of noise; 3, freedom from dust; 4, freedom from smoke; 5, a natural system of ventilation; 6, a proper disposal of all sewage; 7, safety from fire; and, 8, accessibility.

For smaller hospitals, up to 150 beds, depending entirely on conditions, either the solid triangular plan or the L-shaped plan is the best for many reasons. Either of these forms is readily enlarged with the conservation of all the requirements in building and maintenance mentioned. For solid quadrangular buildings the positions of those marked A, C and D (Fig. 2) are especially recommended. In A the slight shading at the north of the building indicates that between 8 a. m. and 4 p. m. there is practically no sunlight at this wall, but this would be of no great consequence, inasmuch as there could be east and west windows in the rooms facing this part of the building, and as the operating-rooms are always placed to the north the direct north and south plan shown at A is the one that is usually

1. Ochsner, A. J., and Sturm, M. J.: The Organization Construction and Management of Hospitals, Cleveland Press, Chicago.

adopted. The one at B running east and west is not recommended under any circumstances, for the shaded portion shows that from 8 a. m. to 4 p. m. during the entire year, and for a great period of the year, that side is in shadow the entire time, meaning that the rooms on this side are practically without sunlight.

For L-shaped hospitals the positions of those shown at B, D or F (Fig. 3) should be used, and these are particularly recommended where there is an extent of ground because such a building is easily enlarged and can be placed in such manner that the entrance would be in the angle at I in D, making a very sightly and even imposing structure or one having a homelike and quaint appearance.

There are only two ways in which U-shaped hospitals can be placed so that every room obtains sunlight; the one shown at E is used quite frequently, but this plan is not applicable to hospitals of less than 100 beds.

Locations like those shown at A, B and H (Fig. 4) should be avoided, as there are deep shadows thrown at all times where the black is shown. Figure E can be used, inasmuch as all of the service-rooms can be placed on the side where there is shade, including the stair hall and elevators and the room for eye patients, and on the top floor the entire working department.

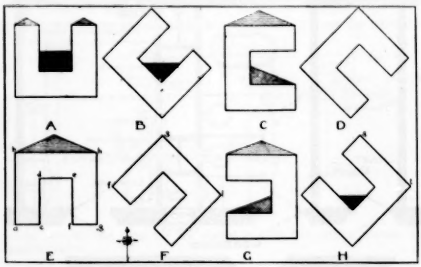

Fig. 4.—Diagram showing position of U-shaped hospital and the amount of shade thrown.

MASONRY

In the construction of hospitals only those points which are of special interest need be mentioned. Attention is called to the necessity of waterproofing the foundations so as to exclude any possibility of soil gases and dampness which will be found even in the dryest locations. The illustrations (Fig. 6) show the method in which this should be done, running the waterproofing under the basement floor to connect with that of the walls. This is to be done with successive layers of burlap and marine cement.

CARPENTRY

It is hardly necessary to state that when the building is being trimmed the minimum of woodwork should be put in, on the supposition that all hospitals constructed in the future are to be fireproof, and that even if they are not entirely fireproof, the rule holds that the trim should be simple in design and that there should be as little of it as possible, as it requires constant attention.

Open-grained woods are not recommended. The close-grained woods like maple and birch are best adapted to hospital use. It is necessary to treat open-grained woods with fillers, whereas with the close-grained woods a harder and smoother surface can be obtained.

The doors can be without panels, but this is a matter of taste rather than of expediency, except for the fact that without panels there are no moldings to catch dust and, therefore, less cleaning is necessary, and one of the objects in designing the trim and finish of hospitals is to do away with as much labor as possible. Where this can be reduced to a minimum by the simple expedient of excluding the moldings of panels it is well to do so.

FIREPROOFING

Assuming that all hospitals should be fireproof, the question arises, what is the best as well as the cheapest material, and the best and quickest method of erecting such a building? Shall the building be built entirely of reinforced concrete or entirely of brick and clay materials with structural steel members, or are the walls to be built of brick, the floors of reinforced concrete and the partitions of tile or one of the plaster products? Local conditions and the distance from the base of supplies, the experience of local contractors, and in some instances the minor details which so often determine such questions, naturally must be considered.

The selection of materials is, after all, only a question of expediency so long as it is borne in mind that

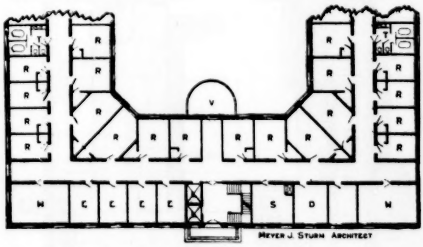

Fig. 5.—Developed plan for U shaped hospital. In the development of the U-shaped hospital, by removing the partition between the rooms, wards are formed on such floors as required. The wings on either side of the center are extended to the required length for the capacity of the hospital.

the building must be fireproof. In a wide range of experience it has been found that building the foundations of concrete and the superstructure of brick with reinforced concrete floors and reinforced structural members, and by making the partition of hollow tile or one of the plaster products, under ordinary conditions, will fulfill all requirements. In the small non-fireproof hospitals, large, easily accessible porches should be built, having stairs to the ground.

PLUMBING

So much has been written on this subject, and the progress has been so rapid in this branch of construction, that it is unnecessary to go into detail, but there are a few points which are worthy of consideration. The first requisite is necessarily a good drainage system which will work perfectly and which has an outlet of sufficient capacity and at a distance below the sewerage system of the building adequately to dispose of the sewage at all times.

The size and pitch of all drains should be carefully calculated. Tile sewer-pipes should never be used in-

side the building. In the installation of water-supply, exact calculation should be made for the quantity of water for all of the fixtures and should be designed to prevent all water hammer or noise, both by putting air-chambers on the pipes themselves and on each supply on the fixture. There should be sufficient shut-offs so that all the supplies can be properly taken care of.

In the selection of fixtures, tubs of the pattern which are set to the floor are recommended, as these can be put into the floor at the base, thus precluding the possibility of the lodging of dirt under the tub. All tubs should stand free so that a person can have access on at least three sides. The equipment of toilet and bath and service-rooms should contain slop-sink, slop-hopper and bed-pan sterilizer.

The service and toilet-rooms should be separated so that there is no interference of patients and nurses, and also that the odors from the service-rooms may not be offensive, even momentarily, in the toilet-room. Between these two rooms there should be a space of about three feet to facilitate access to all of the plumbing-pipes and wires, and to supply the ventilating ducts for the ventilation of the toilet and service-rooms on all floors.

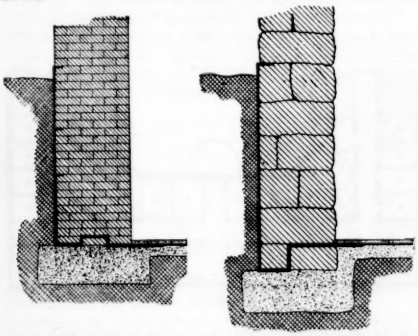

Fig. 6.—Proper method of waterproofing walls and floors in hospitals. It is necessary to waterproof walls and floors to exclude all dampness and soil-gases.

The fixtures in rooms so arranged can be set so that all sides are accessible. The closets are of the wall pattern in which no part of the fixture is on the floor, the slop-sink being of the ordinary type and the slop-hopper having a deep water seal with the flush and water-supply operated by the foot-pedal valves, so that the nurse's hands are free.

The fixtures for operating-rooms, the kitchen and other departments need not be gone into here, as they are usually a matter of individual choice.

PLASTERING

What is the best manner of treating the walls and ceilings in hospitals? This would depend entirely on the plastering of the walls themselves primarily, but it is a universally understood fact at present that the only economical plaster to use is the prepared hard wall plaster. After the walls are thoroughly dry, they should be treated with a solution which will preclude any possibility whatever of the paint or enamel being chipped, stained or damaged by the action of the partition material and the brick walls, and then they should be given at least three successive coats of the paints and enamels specially prepared for this purpose.

PAINTING

The use of gloss enamels and of paints left in the gloss is not to be recommended, inasmuch as these are hard on the eyes. The dull-finished enamels are as easily cleaned as the high gloss, although they are more susceptible to finger-marks, but this is of minor importance when the effect on the eye and the disconcerting reflection are taken into consideration. Paints should not be stippled to take the gloss from the last coat, but should have a dull finish when applied. Varnish on woodwork can be left in the gloss.

ELECTRIC WORK

The matter of wiring need not be dwelt on, except to say that all such wiring for power, lighting and even telephones should be done in conduits so that, in case any of the circuits need repairing, the wires can be easily withdrawn and new wires run into the pipe with the least possible delay and expense. In fireproof hospitals this is the only method which can be used.

Cut-out boxes, or centers, as they are sometimes designated, should be of the buss-bar type. These should

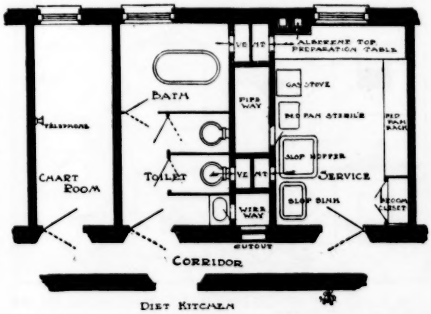

Fig. 7.—Plan of toilet and service-room, showing proper arrangement and fixtures required. There should be in the service-room an Alberene table for the preparation of hot-water bags, douches, etc., also a broom-closet for the hanging of mops, brooms and cloths, and a special sink for keeping flowers over night.

have branch circuit switches. These circuit switches are important, inasmuch as, if they are used, it is not necessary to shut off the current from the entire floor when repairs are to be made on one or two lights on a given circuit. Only the circuit controlled by these secondary switches need be put out of service for the short time it takes to make repairs, instead of inconveniencing every one on the floor. Each floor should be independently controlled from a cut-off on that floor only. In this way each floor is independent of every other floor, and each circuit is independent of every other circuit, a condition which has its self-evident advantages.

The number of outlets for fans and lights in rooms is a matter which must be determined for each case, but there is no question that in the service-rooms and operating-rooms and even diet-kitchens there should be full circuits sufficient to take care of the ever-increasing demand for electric apparatus.

Probably the principal part of the installation of electric work, aside from the lighting, is the installation of a system for calling nurses. In Figure 8 is

shown in simplified form the best system that has been devised for this purpose for the following reasons: It requires only the ordinary wiring that is necessary for the straight electric work, and is absolutely quiet and positive. There are no bells, drops or other complicated mechanism in this system, which consists merely of an electric light over the door, preferably with a red globe so that it can be seen both night and day, and either an extension cord with a push-button or a switch which is at the bedside of the patient and, when operated, lights the lamp over the door, at the same time lighting a pilot-light in the diet-kitchen or in the nurses' room or chart-room, as the case may be: or, if desired to have the light at all three stations, this can be done by simply putting these lights in multiple with extensions.

It is absolutely necessary for the nurse to go to the bedside of the patient before the light over the door and the pilot-light and its extensions can be extinguished; and the pilot-light can not be extinguished until all the lights on the floor have been put out, namely, by the nurse going to the bedside of each and every patient who has called, attending to their wants and extinguishing the light from the bedside.

Telephones in hospitals should have some arrangement by which they can be connected to the outside telephones, but the inside telephones should be of the plug pattern and should be of the intercommunicating, non-interfering type so that conversation can be carried

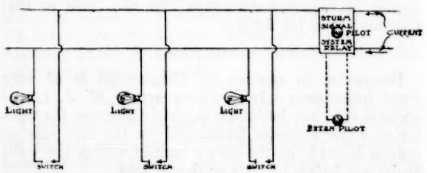

Fig. 8.—Wiring diagram for signal system for calling nurses by electric light.

on between any two stations without interference from any other station.

HEATING AND VENTILATION

Probably the most vital subject, aside from the general arrangement of a hospital, is ventilation and heating. The one method of ventilation which is beyond all dispute the best both in simplicity, efficiency and economy is what is known as a natural system of ventilation, namely, the wind, or, as it is sometimes called, perflation. Artificial ventilation at best can be only a poor substitute for the open window or some substitute for this which will give direct outside air.

The method now in vogue consists in taking air into a building, running it across hot coils and scorching it, then running it through some sort of air-filter or air-washer to take out the particles of dust, then letting it run across another radiator and scorching it again, and then unmercifully spanking it until it is supposedly doing our behest; but, turning and twisting and fighting against this unseemly conduct on the part of the spanker, it goes its devious ways, sulking and often turning about and going in the opposite direction against all coaxing and importunities. By the time the air is ready to enter on its duties it goes with such impetuosity or so slowly that it is of little use for its intended purpose.

In this climate and as far south as the extreme southern states, the open window can be used only for several months in the year, and some other means must be devised for taking care of the ingress of fresh air and the egress of foul air during the remainder of the colder months.

I do not advocate at all the heating of hospitals by the same means as that employed for the ventilation, namely, the hot-blast system, as I think that heating and ventilation should be entirely independent. The direct radiator with preferably a hot-water heating system is the best system for warming, and the subject is being treated with this in mind.

By building a hospital on the solid rectangular plan or the variation from this on the U-shape, in which there are continuous corridors, the entire corridor can be taken as a ventilating duct. Ventilators are placed in the lower sash of the windows, and transoms are made over all the doors, swung in such a manner that there can be no draft. The fresh air comes in at the ventilators and goes out through the halls by way of the

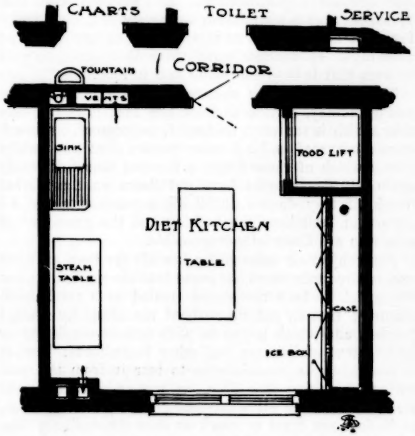

Fig. 9.—Plan of diet kitchen: table in center is built on pipe stands with dish racks over and tray-racks under the top. The case at the side is for dishes, linens, etc.

transom. Large openings are provided at the top or above the windows or doors at both ends of the corridor with a good radiator below, it being, of course, necessary as far as possible to put the radiators in the rooms under the windows having the ventilators. In this manner a gentle current of air will pass at all times from the rooms into the corridors and out through the ventilators.

The bugaboo about drafts is gradually being dispelled, for a gentle draft of even partly temperate air is an indication that the air is being changed and will hurt no one. In extreme cases a light hood could be worn over the head of the patient to ward off any possibility of earache or neuralgia, if the patient were susceptible to these, but in most instances the bed is so placed that drafts come across the foot and not across the head of the bed.

When the air comes into the room and is heated it will naturally travel toward the ceiling, go out by the

transom, and the vitiated air, being warmer than the air at the floor of the corridors, will naturally go along the ceiling. I have employed this means of ventilation in practically all hospitals of the size under discussion, and have never found it to fail; in fact, it has worked admirably in all such cases, and I consider it in the ordinary hospital to be as effective as any mechanical system that could be devised under present conditions. The economy of such a system is manifest.

In a system such as I have described an excellent auxiliary for the additional ventilation which would be required in toilet- and service-rooms and diet kitchens, and also in operating-rooms, is to have large ducts, running from the basement to a point above the roof, with heaters at the foot of each duct.

FLOORS

The much-discussed subject of floors and the oft-repeated question as to what is the best material for floors will ever arise, for whenever the supposedly ideal floor has apparently come to stay it is found to lack some requisite qualification. It has been said that "precedent bears no relation to the subject, apparently, for what is considered as ideal by one authority will be disparaged by another until there is a divergence of opinion that is both confusing and unfortunate."

There are so many so-called sanitary floors on the market to-day, each with its claim that it is the only floor which is sanitary, acidproof, waterproof, fireproof, even crackproof and all other proofs, that one hardly knows which of these floors is the real floor. Recently one or two companies have put floors on the market which, if they do not fulfill all requirements and all claims, at least have the backing and the guarantee of men who are financially responsible.

The subject of wainscoting has always been an open one, but recently there has come into the market a glass tile which is both made and treated in a mechanical manner; that is, put up without the unsightly spalled patches, and which is put on with cement consisting to some extent of litharge and other ingredients; thus it is practically impossible even to tear it from the wall without breaking it. This, in my estimation, would make the best of all wainscoting for operating-rooms, as it does not craze or crack as does the ordinary tile. It is non-absorbent and has a great advantage over such materials as soapstone and slate, in its perfectly white appearance. But so far as sanitary qualities are concerned, the hard plaster properly treated and well enameled fulfills every requirement.

Without going into detail, all floors should have coves at the walls.

ILLUMINATION

There is nothing in the hospital which has been left to chance so much as illumination. The subject includes the placing of plugs in the rooms for portable or reading-lamps, the former for the use of the doctor in examining the patient, and the latter for the convenience of the patient for reading-lights, fans and warming pads.

Illumination should be considered not from the point of view of what has been done, but from that of the actual conditions which exist, namely, the plan of the floor and the height of the ceiling, the purpose for which the various rooms are intended and the luminant or means of producing the light. The first of these depends entirely on the architect's plan, and the second is always a matter of arrangement. The third is one which is rather open. The different luminants, of course, are gas and electricity.

Globes for various purposes have been fully discussed, as also the methods of lighting different rooms, all of these being subject to exact calculation, and they should be so handled.

The ideal light for operating-rooms has thus far never been used to my knowledge, namely, the system of rarefied gas, electrified, in tubes of one form or another, so that a white light can be obtained that has a low relative intensity with an extremely brilliant illumination.

The Cooper-Hewitt light is the one with which we are most familiar, which has a mild and clear light of great magnitude and low intrinsic value, but is impossible for use in operating-rooms owing to the extremely bad color distortion to which red is subject under this light. This objection can not be waived.

The Moore continuous tube, which runs around the entire room and can be made ornamental as well as useful, has solved this problem of color distortion. From this tube can be obtained light either of pure white or sunlight color with varying degrees between.

Why it has not been used in hospital operating-rooms is a question which can not be answered here. This mode of lighting is new and operators as a rule prefer to stick to the old method of having the hot unsightly cluster of incandescent lamps over the table so that they can swing the fixture.

DECORATION

Decoration in relation to illumination is of very great importance. In a recent article W. J. Clark[2] states that in new buildings, in nearly all cases, the walls are of white alabaster finish, and for the first year no change is made as the owner usually wishes the walls to dry out before he puts on decorations.

In the second year the walls are painted or papered, and if the taste of the individual or those in charge runs to dark colors, especially dark reds or greens, colors which are lowest in reflecting properties and which absorb about all of the light thrown on them, the result is that where formerly one or two burners were sufficient to light the room satisfactorily, now three or four are required.

Complaint is made that the increase in the lighting bills is out of proportion, inasmuch as rooms are being occupied in the same manner that they were before and that the light is burning to no greater number of hours, and the fact that the entire trouble is due to the selection of the colors is entirely overlooked. This oversight is the more curious since everybody knows and understands the bright, cheerful effect of light colors. The desired effect can be obtained by using soft stippled colors or soft tones, with a slight stenciled decorated border, or a change of color between the walls and ceiling, or the thousand and one methods of obtaining artistic effects without in the least sacrificing any of the light.

In rooms where there are eye patients the walls and ceilings should be of neutral tints, and the illumination should be carefully considered with a view of having, if possible, no direct light at any time which would fall from the source of light to the eye of the patient.

2. How Color of Walls Affects the Cost of Lighting, The Illuminating Engineer, III, No. 3.

I have found that in corridors as well as in rooms a uniform scheme of decoration can be easily followed by making the lower floors of a very light shade of color in the rooms, say green, in its various shades, and darkening these colors by a shade or two in the higher stories, making a progressive color scheme. Since most of the daylight would be in the upper stories, even under this condition, these upper stories should be extremely light in color without having a glare.

The corridors could best be treated for the lighting effect in the very light tans or chromes.

REFRIGERATION

In smaller institutions, especially those having about 150 beds, mechanical refrigeration can be installed so that the main refrigerators and the small diet-kitchen boxes could be run from such a plant and sufficient ice for ordinary purposes could be made.

There are small plants now made which are very economical and which fulfill every requirement at a cost about equal to that for icing a number of boxes and with much less inconvenience and considerably less dirt and disturbance.

The brine system is the only one which can be practically used in boxes as widely distributed as they are in a hospital. Ammonia expansion is not particularly adapted to places where it is liable to do the harm that a leak in a pipe would cause in a hospital. The brine system should be installed in such a manner so that it would be necessary to operate the machine for cooling the brine from six to eight hours only, with a small auxiliary pump to keep up the circulation when the main pump was not working.

EQUIPMENT IN CONSTRUCTION

I need not dwell on the vacuum cleaning systems and the general equipment of kitchen, laundry, sterilizing-room and morgues. The general equipment of the toilet and bathrooms and of the service-rooms for the nurses have been mentioned. In reference to special equipment, attention is directed to the necessity for bed-pan sterilizers and specially constructed bed-pan racks in all service-rooms on each floor.

In the main kitchen there should be a large steam table, and in the diet kitchens smaller steam tables with combination gas stove so that food may be served at all times hot and palpatable.

The equipment of diet kitchens varies so that no definite details can be given, but an arrangement of plan and equipment that has been used considerably and has been very successful is to place the equipment on one wall and a long table in the center of the room for the make-up of the trays. This table has racks underneath so that trays can be made up ready for the food at convenient times.

The ordinary sterilizing apparatus for the sterilizing-room is familiar to all, but the arrangement can be obtained by having the preparation table and sink and the sterilizers with the small supply-room to which the house nurses go to get their supplies, without the necessity of going through the operating-rooms or into the sterilizing-rooms.

The pathologic laboratory should not be left to chance; that is, provision should not be made for every thing else and the laboratory put in the space left, if any. The laboratory is one of the most important features of well-planned and properly-conducted hospitals.

In the general arrangement of the hospital provision should be made that the matron and superintendent should have each a private suite of bedroom, office and bathroom. There should also be provided trunkrooms and storerooms, the latter for the storing of quantities of supplies to get the advantage of price.

The matter of linen-rooms, chartrooms and space for carts should also be given consideration.

84 La Salle Street.

AN EPIDEMIC OF ACUTE ANTERIOR POLIOMYELITIS

OCCURRING IN SALEM, VA., AND VICINITY

R. MINOR WILEY M.D., AND J. C. DARDEN, M.D.
SALEM, VA.

During the past summer there occurred in Salem, Va., and the adjacent country a small epidemic of anterior poliomyelitis. The first case developed June 2 and the last one reported to the Board of Health was August 10. Some time previous to this outbreak the weather had been intensely hot, while the prevailing humidity was high. After several cases had developed they were reported to the State Commissioner of Health, and he was asked if the disease was prevalent elsewhere in the state. Singularly enough, he reported that it was not reported from any other locality. Just why this town and the adjacent territory were visited by this epidemic we are entirely unable to explain, as the authorities do not class this as a contagious disease, and, so far as we are aware, there were no local conditions which might have produced this epidemic, outside of the intense heat and high humidity, which, however, obtained generally in this section of the state. Neither did this epidemic follow in the wake of an epidemic of any acute infectious disease, as is sometimes the case. There were twenty-five cases in Salem and the adjacent country, a strikingly large number; whereas Roanoke, a city of about 35,000 inhabitants, seven miles east of Salem, connected by a trolley line, and daily visited by scores of Salem people, escaped, as we are informed by the Roanoke health officer, with only a single case, occurring in September, quite a while after the development of the last one of our cases.

The reports in some of these cases are not so full and complete in detail as we would desire, because in some cases the attending physicians did not record notes and, therefore, were able only to recall the main points in each one. The main purpose of our paper is to call attention to the occurrence of such a large number of cases of this disease, practically amounting to an epidemic, which, so far as we know, is without precedent in this section of Virginia.

Authorities are not agreed whether the disease is of microbic or toxic origin, although in our opinion it is due to a specific organism. We regret our inability to shed any new light on the obscure points in this disease, either as regards etiology, pathology or treatment, but we hope by this report to evoke an interest in, and a discussion of, this subject.

REPORT OF CASES

REPORTED BY DR. J. P. KILLIAN, SALEM, VA.

CASE 1.—The patient, male, was aged 3; family history good. The physician was called June 19, 1908. The patient was prostrated; the pulse was rapid, the temperatue 103, the left arm partially paralyzed and the left leg entirely so. This

condition continued for about ten days; then the patient began to improve slowly, and in three weeks was able to walk by dragging the leg, and now, after nine weeks, is able to walk very well.

CASE 2.—The patient, a boy, aged 3½ years, was first visited June 27, 1908. His temperature was 104. He had a severe headache and rapid pulse; his left leg was completely paralyzed. Within a few days the fever disappeared and the patient began to improve. Now, at the end of nine weeks, the patient can walk across the room.

CASE 3.—The patient, a boy, aged 3 years, had partial paralysis of the right arm and the right leg. The patient has made perfect recovery in eight weeks.

CASE 4.—The patient, a girl, aged 2 years, had partial paralysis of the left leg and the left arm. This was a mild case, with apparent complete recovery.

CASE 5.—The patient was a girl, aged 14 months. The physician was called August 16. The patient's temperature was 101, pulse 120, with complete paralysis of all the limbs. This case had a fatal termination on the tenth day, as the result of the involvement of the respiratory center, which became manifest on the sixth day of the disease.

REPORTED BY DR. J. L. STEARNES, SALEM, VA.

CASE 6.—The patient was a girl, aged 18 months. The physician's first visit was June 2, 1908. The child had paralysis of the left leg and retention of urine, and evinced great pain when moved. The temperature was 103. On August 24 the patient showed gradual improvement, as she could move her leg, though she was not able to walk.

CASE 7.—The patient, a girl, aged 2 years, was unable to walk or stand alone at the physician's first visit, and suffered pain when moved. The temperature was 102, and there was difficult urination. This was a case of partial paralysis of both legs, with full recovery.

CASE 8.—The patient was a boy, aged 18 months. This was a case without special interest, in which both legs were paralyzed. One leg has regained its function, but the other remains almost entirely paralyzed.

REPORTED BY DR. SAMUEL M. TERRILL

CASE 9.—The patient, a boy, aged 4 years, was first visited July 13, 1908. He then had pain in his head, nausea, profuse sweating and mild fever. Next day his temperature was 104, and he had pain in his head, back and limbs. On July 15 his temperature was 105, with continuance of severe pains in his head, back and limbs. The child was slightly delirious. On this day it was first discovered that all the limbs were partially paralyzed, and there was a complete right-sided facial paralysis. The fever and pain subsided in a few days, and in ten days from the onset of the disease there began a gradual recovery from the paralysis of the limbs, which at this time has completely disappeared, though the facial paralysis still exists to a noticeable degree.

REPORTED BY DR. S. I. CUNDIFF, HOLLINS, VA.

CASE 10.—The patient, a girl, aged 2½ years, white, had had none of the infectious diseases, and prior to this attack had been perfectly healthy. Her temperaure was 103; there was vomiting, general malaise, and profuse sweating. On the second day diarrhea developed, lasting three days. The child was extremely sensitive to touch or any movement of the body, and preferred to lie quietly in bed. On the fourth day paralysis of both legs developed. The temperature returned to normal on the seventh day. The child had retention of the urine beginning with paralysis and lasting four or five days. The acute symptoms lasted ten days, since which time there has been a gradual improvement.

CASE 11.—The patient was a boy, colored, aged 3, with a previous history of uniform good health. The attack was ushered in by headache; the temperature was 102; there was vomiting, pain in the head, back and limbs, with a decided objection to being moved. On the fifth day the patient developed a paralysis of both legs; one eye and corresponding side of face were also affected. The paralysis of the legs has improved to the extent that the boy can walk, but with a staggering gait, which, however, is greatly lessening. The paralysis of the rectus externus, however, shows no improvement.

REPORTED BY DR. J. C. DARDEN, SALEM, VA.

CASE 12.—The physician was called July 1 to see a boy, aged 3½ years, who had been complaining for three or four days. The patient was suffering from pain in the spine, head and limbs, and the skin was sensitive to the touch. The temperature was 102. The child had no desire to eat and had vomited a few times. There was profuse sweating. A slight limping was discovered in the right leg. Two days later the right leg was completely paralyzed and the left leg slightly involved. Further than this the paralysis did not extend. Within two weeks the child began to move the toes of his right foot, and since that time there has been a slight but gradual return of the use of the paralyzed muscles. The patient is at the present time able to walk unaided, though there is some drag of the right foot.

CASE 13.—On August 6 the physician was first called to see a girl aged 16 months, white. The parents said that the child had been feverish and fretful for three days, and the day previous to calling me they had noticed that she could not walk as well as usual. The temperature was 101, the tongue coated and the bowels constipated. There was considerable sweating. The child cried when touched, and objected to being turned over in bed. The left leg and thigh were completely paralyzed. Within a week the fever subsided, and twelve days from the onset of the disease the child was able to flex her toes. During the succeeding week she could move her leg. At the present time she can walk by the aid of her mother's hand, but the affected muscles are very weak and considerably atrophied.

REPORTED BY DR. R. M. WILEY, SALEM, VA.

CASE 14.—The patient was a boy, aged 3. The physician was first summoned on June 26, 1908, because the child had been complaining a few days before, and could not now walk. Complete paralysis of the left leg was present at this time; the temperature was normal, though the patient had no doubt had fever previously. The child had pronounced hyperesthesia when moved, and begged not to be disturbed. When lifted, his head would fall back, showing a loss of power in neck muscles. In course of two and one-half weeks he began to show improvement; could move his leg and hold it up. He suffered a relapse July 26, and again the leg was paralyzed. In the course of a week he regained use of leg and on August 10 he had been walking, but with a decided limp.

CASE 15.—The patient, a boy, colored, aged 4, was first visited July 4, 1908. The child had then been sick a day or so. He complained of headache, backache and pain in the limbs; had vomiting and moderate fever. Paralysis of one leg developed on July 7, and the next day the other leg was paralyzed, and the day following both arms were paralyzed. Fever of a high type continued, and the respiration and heart action both became irregular. Both sides of the face and the muscles of both eyes were also paralyzed, showing that the inflammatory process in the cord had extended to the medulla oblongata. In fact, paralysis was so complete that the child could not move either leg or even turn his head or rotate his eyes. Sphincter control was entirely lost.

This patient also showed a characteristic symptom, profuse sweating. In about two weeks from the onset of the disease the breathing improved in character and the child was able to slightly flex his fingers and toes. The prospects for recovery appeared good, but within another week the respiration became more involved, and child died from respiratory failure after surviving four weeks. This case serves as an exception to the statement of Starr, that the prognosis is favorable if the child survives as long as ten days from the onset of paralysis.

CASE 16.—The patient was a girl, aged 3, white. This case proved rapidly fatal; the physician's first visit was on July 17 and the child died on July 19. At the first visit the child had moderate fever, complained of headache, and evinced pain upon being moved. A paralysis of one leg was then evident, and on the second day there was a complete paralysis of all the limbs; respiration was much embarrassed, being irregular and rapid; the heart action was also irregular and rapid.

The child's expression was one of extreme terror. She died on the third day of cardiac and respiratory paralysis. There was in this case a paralysis of the muscles of deglutition as well as of the muscles of the face and eyes.

CASE 17.—The patient was a boy, aged 6, white. This was a very slow case in development; the child had been sick for six days, complaining of general malaise, with a moderate fever, before any signs of paralysis appeared, which was on the sixth day. This consisted of a partial paralysis of one leg. This case was so insidious in its development that the diagnosis of the consultant and myself was typhoid fever. This proved to be a mild case, with complete recovery.

CASE 18.—The patient, a boy, aged 3, white, had experienced none of the infectious diseases of childhoood. When first visited, the patient showed moderate fever and complained of general aching. Paralysis of one leg was discovered on the third day. Beyond this the trouble did not extend. A gradual improvement began in two and one-half weeks from the onset, and in a few days the child was able to walk, but even at the present time there is a decided dragging of the affected leg.

REPORTED BY DR. E. W. DAVIS, SALEM, VA.

CASE 19.—The patient was a boy, aged 3, white. This case presented no points of special interest. Both legs were completely paralyzed. The child has recovered from the paralysis with the exception of a slight dragging of the left foot.

CASE 20.—The patient, a boy, aged 3½, colored, affected with partial paralysis of the left leg and right arm, recovered completely.

REPORTED BY DR. W. P. NORRIS, SALEM, VA.

CASE 21.—The patient, a boy, aged 4, colored, had had roseola, but no history of other disease. When first seen he was constipated and languid; his temperature was 102, his tongue white-coated, and his pulse about 110. On the third day paralysis of left arm and leg developed. Recovery is now nearly complete.

CASE 22.—The patient, a boy, aged 13 months, white, was vomiting, had two or three degrees of fever and very restless when the physician was called. The child seemed to improve after first visit, until the fourth day, when paralysis of the right leg came on. Recovery was almost complete in two weeks; is now complete. The patient had had no previous disease.

CASE 23.—The patient, a boy, aged 3, colored, with negative history, when first seen was paralyzed in the left arm. He could not swallow well for two or three days. Recovery ensued in ten days

CASE 24.—The patient, a girl, aged 2, white, had no history of previous disease. She vomited, was restless, and had high fever. Her bowels were very loose for several days. Fever continued until the fourth day, when paralysis was first noticed, which affected the left arm and leg. No improvement was noticed for six weeks. The child is now much better, but is not completely recovered, and in all probability will never be. It is feared that the leg will never be normal, as there is now indication of atrophy.

CASE 25.—The patient, a girl aged 15 months, white, had a partial paralysis of the right leg. There was complete recovery in three weeks.

ANALYSIS OF CASE REPORTS

An analysis of these cases shows the following points of interest: The disease was confined to children under 5 years of age, except in one case, a boy of six. The youngest patient was 13 months old. There were 7 cases in which one leg was involved, 1 case in which one arm only was affected, 5 cases in which one arm and one leg were paralyzed, 1 case in which one arm and the leg of the opposite side were affected, 6 cases in which both legs were involved, 4 cases in which all the limbs were paralyzed, 5 cases showing bulbar paralysis, and 3 deaths, which shows a mortality of 12 per cent., higher than is commonly attributed to epidemic infantile paralysis, the authorities stating it to be 6 or 7 per cent. In the sporadic form of this disease fatal termination is said to be a rare occurrence. In all the fatal cases there was respiratory and cardiac paralysis. A feature in many of these cases worthy of note, because it misleads many of the laity, and possibly some of the profession, who have not had experience with this disease, is the extension of the head, which is due to a paralysis of the neck muscles, in contradistinction to the rigid retraction of the head in meningitis. There were 8 cases of complete recovery, and 14 of incomplete recovery. Each of these incompletely recovered patients has shown some improvement, and it is possible that some of them may yet ultimately recover, as it is stated by M. Allen Starr that "as a rule such improvement is likely to go on for two years." A striking feature in a majority of these cases was pronounced hyperesthesia. Another was profuse sweating. The fact that not more than one case occurred in any house, although in many instances there were other children in the family who associated with the affected child, would seem to prove that the disease is not contagious. Following a decided drop in the temperature of the weather, which occurred in the latter part of July, no new cases developed for three weeks, until a return of the hot wave, which occurred early in August, when two additional cases developed on August 6 and 10, respectively, thus apparently sustaining the belief that hot weather is in some way essential to the development of this disease.

TREATMENT

In regard to the treatment, we regret that our colleagues failed to make any report. We ourselves administered salicylates and applied counter-irritation, either in the form of mustard plasters or of tincture of iodin to the spine during the acute stage. The subsequent treatment consisted of ascending doses of potassium iodid to promote absorption in the inflammatory area in the cord, and strychnin in increasing doses to the point of toleration for its tonic effect. We also employed massage, warm baths, and whenever practicable the galvanic and faradic current. None of these patients have as yet developed deformities, consequently we have nothing to report in the way of orthopedic treatment, although we are well aware of the great importance of orthopedic apparatus and of nerve and tendon transplantation in the later treatment of these cases.

MECHANICAL (DYNAMIC) OBSTRUCTION OF THE BOWEL *

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It is not the purpose of this paper even to touch on all of the various phases of intestinal obstruction, but merely to call attention to a few features of this interesting affection. The first is the abuse of purgatives in this condition. Every surgeon has seen deaths caused by the injudicious use of purgatives. There are few things that require more judgment or skill than the correct exhibition of a suitable purgative at the proper time. Certainly in acute infectious diseases or in any case in which a toxemia is primarily present, a purgative is not only advisable, but absolutely necessary. It is dif-

* Read at the meeting of the Medical Society of Virginia, Richmond, Oct. 23, 1908.

ferent, however, with acute obstruction from any other cause than that which has just been mentioned. A sudden obstruction, not due to nervous affections, always means one of two things: either an inflammatory condition of the peritoneum or else some form of mechanical obstruction, as bands, strangulated hernia, intussusception, volvulus, stricture, or tumor.

When an inflammatory condition is present, purgatives are contraindicated. The great principle of rest is applicable in every form of therapeutics, whether medical or surgical, and inflammation of the outer coat of the intestines is no exception to the rule. This principle is recognized so universally in other instances that it should be superfluous to call attention to it here. A fissure of the anus is best cured by temporarily paralyzing the sphincter, so giving the fissure rest, when it will promptly heal. The object of using splints for broken bones and retentive apparatus in injury of any portion of the body is solely to secure rest for the injured part. In order to give rest we must first find the function of the organ involved and attempt to suspend this function, either completely or partially. Affections of the eye, for instance, would not be benefited by rest in bed, unless light was cut off and the patient prevented from seeing, nor would a darkened room help the patient with a broken leg unless the bones were properly set and retained in a position of rest.

One of the chief functions of the intestines is to propel the food it contains, and this is accomplished by peristalsis. In the inflamed bowel we should apply the principle of rest by restricting this function as much as possible, so we should attempt to inhibit peristalsis rather than accelerate it. If we give purgatives in such conditions, whether the inflammation is due to appendicitis or to whatever cause, we not only tend to spread the infection, but we fly in the face of the practice we follow when other organs are affected, and instead of lessening the function of the bowel and so giving rest and an opportunity to recuperate we make matters worse by increasing peristalsis with the purgative.

There are some instances in which a purgative apparently does good in inflamed conditions of the peritoneum, because the toxemia from the infection is so great that the purgative causes elimination of the toxins and benefits the patient in a constitutional way, while really making the local condition worse. If such patients were given an abundance of water, and if enemas were used, which empty the lower bowel with a minimum amount of peristalsis, a sufficiently beneficial effect could be obtained in an eliminative way with but a small increase of peristalsis, while at the same time more work would be thrown on those great eliminative organs, the kidneys, by means of the copious supply of water. In this way the excretive function of the bowel would be partially suspended and the rest necessary to repair would be obtained.

When the acute obstruction is due to some mechanical cause, the contraindication for a purgative is even plainer. All purgatives act either by promoting peristalsis in some way or by stimulating the secretion of the intestines. As a matter of fact, while some purgatives act more decidedly in one of these two manners, they all tend to increase peristalsis either directly or indirectly. The more vigorous the purgative in mechanical obstruction the more absolute the obstruction will be. Just as pulling on a string increases the security of the knot, so purgatives by stimulating peristalsis will make the obstruction from any mechanical cause more complete, whether it be due to volvulus, bands or stricture. Besides this deleterious effect, the increased secretion within the bowel, caused by the purgative, augments the normal contents of the alimentary canal and causes greater distention, which rapidly adds to the seriousness of the condition. Food of any kind in the stomach aggravates the obstruction by giving the bowel more work, thereby stimulating it to greater activity.

The other point to be considered is the surgical method of dealing with the obstruction. The earlier surgical interference is attempted after reasonable efforts have been made with enemas to produce an evacuation, the better for the patient, as the mortality rate increases with each hour's delay. When distention after an obstruction is very marked, frequently an enterostomy is indicated for drainage to carry off the dangerous toxins that have formed. Whether this should be done depends on the findings during the operation, and must necessarily be left to the judgment of the surgeon. When resection is attempted, the method by which the bowel is united is of great importance. A fixed metallic body, with a small lumen for drainage, such as the Murphy button, which by its weight may cause a kinking or volvulus of the portion of intestine in which it has been inserted, is hardly the logical thing to use in such conditions. Intestinal sutures, carefully placed by one who has acquired skill in this line either by clinical or by experimental experience, are much safer and can be inserted in but little longer time than it takes to insert the Murphy button. Of course, when the bowel can not be delivered into the wound and sutures can not be accurately placed, the Murphy button may be indicated; but, judging from my experience, such conditions are quite uncommon.

Since the opening of Memorial Hospital, July 27, 1903, about five years ago, I have done eleven resections of the bowel. These cases will be reported more fully in a subsequent paper, but I will here give a brief summary of them. Of the eleven cases, two were of such a nature that union could not be later accomplished.

In one instance, resection of a large, malignant tumor of the cecum was done, and an artificial anus was made. The patient left the hospital, but soon developed metastasis in the liver, from which he eventually died. There was no time at which a subsequent operation would have been justifiable.

In the other case, which is reported below, the involvement of the rectum by gangrene made union here impossible, so a permanent artificial anus was established.

Of the other nine cases, in one, resection involved the upper rectum, was deep in the pelvis, and on account of the adhesions and raw surface left after removing very adherent pus tubes, suturing was apparently contraindicated. The patient made a satisfactory recovery.

Another patient was a feeble man whose intestine was gangrenous from a strangulated hernia. In order to make assurance doubly sure, a Murphy button was used and sutures were inserted over this. This was one of my early cases, and I believe I made a mistake in using the button, as events subsequently proved, for the patient developed a large fecal fistula evidently due to the presence of the button. The fistula closed rather suddenly two months later.

In seven cases union was effected solely by suturing. Of these patients six recovered uneventfully. One patient died the third day after the operation. He had a strangulated hernia and two different loops of intestines were involved, which made a double resection necessary. The patient was a chronic alcoholic, and considerable chloroform had been administered to him for some time before he came under my care in order to reduce the hernia. A postmortem was held by Dr. E. G. Williams, pathologist to the hospital, and showed a hobnailed liver and other evidences of chronic alcoholism. Both resections were intact, and there was no sign of leakage from either of them, nor was there any indication of peritoneal inflammation. The small bowel contained a few ounces of blood, but hardly enough to affect materially the fatal issue, which was, in all probability, due to the suspension of the functions of the liver and kidneys following the large amount of anesthetic necessary in a man who had been a heavy drinker for many years. Certainly this death can not be attributed to any technical defect in the operation. In none of the cases in which suturing alone was used was there a fecal fistula or subsequent trouble in any way attributable to the resection. The clean and uneventful recovery of these cases so far as the resection is concerned contrasts strongly with the stormy convalescence sometimes seen after a Murphy button has been used, when the formation of fecal fistulas and anxiety about the passage of the button, which may require a subsequent operation for its removal, often afford an occasion for considerable apprehension.

The two cases reported below occurred within three weeks of each other and are selected to illustrate two types of mechanical obstruction in adults.

CASE 1.—Intestinal obstruction from a band. Enterostomy, followed by resection of the bowel and union by suturing.

Patient.—D. T., female, aged 21, colored servant. Admitted to Memorial Hospital, Aug. 2, 1908. Discharged Sept. 9, 1908. Referred by Dr. Angus Nichols, of Richmond, Va. Family history and personal history of no significance.

Present Illness.—Three months ago the patient complained of severe pain in the right side of the abdomen, which was accompanied by vomiting. Three days after this the patient was operated on in Norfolk, but it is impossible to learn the nature of the operation except that drainage was used. She left the hospital after one month and was apparently well until Friday, July 31, when she suffered severe pain in her abdomen, particularly in the right side, with diffuse tenderness and persistent vomiting. On the following Sunday she was referred to me and admitted to Memorial Hospital. After her stomach had been washed out and the administration of everything by mouth discontinued she seemed much better. Soapsud enemas were ordered and a small bowel movement obtained. On the next day, August 3, the patient was considerably worse, with a pulse of 120 and the abdomen becoming much distended. An operation was decided on at once.

Operation.—Under ether anesthesia an incision just to the right of the old median scar was made. A considerable quantity of blood-stained serum was found in the peritoneal cavity. The small intestine was distended and congested. At a point eight inches from the cecum a firm band crossed the ileum and completely occluded its lumen. The band ran from the right iliac fossa to the root of the mesentery. The intestine below this point was collapsed. The band was divided and the bowel underneath it was found to be partly gangrenous; the mesentery for several inches above this point was infiltrated and thrombotic. The patient's condition was becoming rapidly worse, her pulse being 180, and very weak. On this account and because drainage of the distended bowel seemed indicated, an enterostomy was done. The affected loop of intestine was drawn into the wound, sutured to the skin, and surrounded by iodoform gauze. It was then incised and a large rubber tube inserted in the proximal end. She left the table with a weak pulse of 180.

Postoperative Treatment.—The patient was put in the Fowler position with continuous rectal saline infusion and hypodermoclysis of saline solution. This is, practically, the treatment recommended by Murphy and has proved most efficient, not only in curing peritonitis, but in preventing it. Under this treatment she rapidly improved, and on the following day, August 4, her pulse was 110 and of good volume and there was a profuse discharge of fecal matter through the enterostomy. Her improvement was continuous, and on August 15, twelve days after the enterostomy, she was operated on with a view to re-establishing the continuity of the intestine. For several days before this second operation the patient was given sterile food and careful mouth toilet was done every few hours.

Second Operation.—Under ether, an elliptical incision was made, including the enterostomy, the old scar, and the adjacent skin. The bowel opening had been covered with moist gauze to prevent infection from this source. When the peritoneal cavity was entered very dense adhesions were found around the intestines. They were separated and two clamps were placed on the intestine, one above and another below the enterostomy. All of the bowel between these points, including the enterostomy opening and its adjacent skin, was excised in one mass, the surrounding intestines and peritoneal cavity having been carefully protected with moist gauze. The ends of the bowel were then united by a continuous right-angled suture of linen penetrating all coats. A few reinforcing sutures were placed at the mesenteric border, as the infiltrated mesentery made approximation at this point more difficult than usual. Several inches above the line of union a tear was discovered which had probably occurred during separation of adhesions when the abdomen was first opened. This was closed by a right-angled continuous suture, reinforced by mattress sutures to relieve tension. The appendix was congested and very much enlarged. It was removed, being tied off at its base by a kangaroo tendon which included both the mesentery and the appendix. The stump was disinfected with pure carbolic. The patient's condition had become gradually worse until it was quite desperate. Her pulse was 190 and respirations exceedingly bad, necessitating the use of oxygen and at one time artificial respiration. The abdominal incision was rapidly closed with through-and-through silkworm-gut and a large drainage tube was left in the lower angle of the wound.

Postoperative History.—The patient was put to bed with continuous rectal saline injection and hypodermoclysis of saline solution, and as soon as she had reacted sufficiently was placed in the Fowler position. Under this treatment her pulse gradually came down until by the next day it was less than 120. She made an uninterrupted recovery from this time on, except that she suffered a great deal of pain for the first ten days after the operation. This was to be expected from the large amount of raw surface necessarily left after this operation. At the end of two weeks the pain had practically disappeared. On September 9 she was discharged from the hospital after being up for several days previously. There was a small raw surface about an inch in diameter at the lower corner of the wound where the drainage tube had been inserted. There was practically no discharge from this, as there had been but little from the tube at any time. The patient was comfortable and feeling well and her bowels were moving regularly.

CASE 2.—Volvulus of the sigmoid; gangrene of the sigmoid, rectum and descending colon. Resection of the gangrenous bowel and colostomy.

Patient.—S. F., male, aged about 40, colored. Admitted to Memorial Hospital Aug. 17, 1908; discharged September 11. The patient was a deaf-mute and it was impossible to secure a satisfactory history, but he had evidently suffered from this condition for several days and had not been relieved by purgatives.

Present Illness.—The abdomen was enormously distended and coils of intestine could be distinctly outlined. The patient's pulse was weak and about 140 to 150.

Operation.—The patient's condition was so desperate that an operation under general anesthesia could not be considered. Consequently, cocain was used. I thought that the obstruction

was in the sigmoid and probably due to cancer, so an incision was made over the cecum with the idea of making an artificial anus and doing a radical operation for cancer of the sigmoid later on; an artificial anus in the region of the sigmoid would have made a subsequent radical operation in this region much more difficult. After opening the peritoneum a considerable amount of brownish fluid was evacuated. Toward the median line a large cystic mass was felt. Another incision was made in the median line and disclosed an enormously dilated, slate-colored sigmoid which was at first difficult to identify. The gas it contained was evacuated by a trocar and canula and the intestine drawn into the wound. It was found to be a volvulus of the sigmoid which had turned through 180 degrees. The whole of the sigmoid, the upper part of the rectum, and the descending colon were gangrenous. Along the mesenteric border of the affected intestine were numerous black thrombotic areas. Healthy bowel was found about the splenic flexure of the colon, which was pulled down and the intestine divided at this point. The proximal end was temporarily clamped and all of the gangrenous intestine excised, after ligating the mesentery in sections, down to the rectum. The rectum was gangrenous as far as it could be inspected, and it was not thought proper to leave the rectal stump free in the pelvis, so the intestine was amputated through the affected area and the lower portion, which consisted of the upper part of the gangrenous rectum, was sewed in the lower angle of the wound. A tube was inserted in this stump and was packed around with iodoform gauze. The rest of the wound was approximated with sutures except at the upper angle, where the clamped end of the colon was brought down and sewed to the skin. The end of this bowel was drawn snugly around a tube with a purse-string suture. A large drainage tube was put in the primary opening over the cecum to drain the peritoneal cavity and a liberal amount of gauze surrounded the openings of the intestines in the median line to prevent infection of the wound.

Postoperative History.—The patient stood the operation very well. He was put to bed and the head of the bed elevated about two feet. He was given salt solution by hypodermoclysis. There was an abundant fecal discharge within a few hours. By the next day the patient had improved markedly, though there was some difficulty in respiration, and on September 19, two days after the operation, his pulse was only 100 and of good volume, with a temperature of 100. He made an uninterrupted recovery from this time on. The part of the rectum that was sutured in the wound gradually sloughed away. The patient was up and walking about three weeks after the operation and was discharged in good condition on Sept. 11, 1908, twenty-five days after admission to the hospital. On account of the affection of the rectum and the amount of sigmoid and colon removed it will be impossible to restore the continuity of the intestine and the artificial anus will be permanent.

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THEORETICAL AND PRACTICAL CONSIDERATIONS CONCERNING THE SIGNIFICANCE OF THE CONJUNCTIVAL REACTION (OCULAR TUBERCULIN TEST)*

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The new tuberculin reactions have opened up a wide field in connection with both theory and practice and have revived the discussion of many questions that had come to a standstill. I do not regard it as my task now to take up all of the theoretical questions; the lack of space would preclude this. I shall occasionally refer to the papers in which those interested may find further data that may interest them. I believe it would be best to pick out a few practical questions and try to come to a conclusion concerning them.

Recently a number of new tuberculin reactions have been placed at our disposal for the diagnosis of tuberculosis. A large amount of literature has followed the first publication about these matters, a great part of which is worthless because of an insufficient knowledge of the fundamental basis of the reactions on the part of the observers. A recital of such examples is not in place. Such publications have caused confusion and dispute, a fact which has made the practitioner avoid this field of contest. But the time of toil and trouble will pass. It was the unavoidable result of an unsubstantiated approval of methods, from which I kept aloof, as is shown in my first communication on the subject.

We have now first the old subcutaneous method of Koch; second, the *Stichreaction*, just as old, but newly applied; third, the cutaneous and the conjunctival reaction; fourth, a series of so-called "new" reactions which I will not discuss.

The subcutaneous reaction is a specific one; it is a very sensitive test. A positive result indicates the presence of tuberculosis, but does not demonstrate necessarily an active or clinically evident tuberculosis. The occurrence of a positive reaction in 50 to 80 per cent. of clinically healthy individuals tested by the subcutaneous method should guard against such an error. I would not mention such a self-evident fact before this assemblage were it not that such errors are made daily in practice and being stated in literature. (Cf. Röpke and others.)

On the whole, the cutaneous and the *Stichreaction* give the same results as the subcutaneous method, which fact establishes their importance for clinical purposes. They are simple, safe methods which can be substituted for the subcutaneous method, demonstrating the same facts. They demonstrate a tuberculous focus, which, however, may be inactive or latent.

The conjunctival reaction differs materially from the cutaneous and the *Stichreaction*, being a reaction on a mucous membrane. It is positive in active tuberculous processes which are not too far advanced, and does not react in those cases in which a clinical examination is negative. It has already been shown that some of the apparently healthy people who gave the reaction had active tuberculosis. The future will tell whether or not tuberculosis is present in the remaining 5 to 8 per cent. But we can say to-day that, in contradistinction to the other tuberculin reactions, the conjunctival reaction is the one which indicates an active tuberculosis. An apparently healthy individual showing a positive conjunctival reaction is to be regarded in a suspicious light as being afflicted with an active tuberculosis.

These facts are proved by the records of reaction in 4,000 cases obtained under all precautions. The diagnostic value can be found only in the positive reaction. I have never stated that the negative conjunctival reaction excluded the presence of active tuberculosis, but it is improbable, except in cases in which clinically an active tuberculosis is present. For this reason the conjunctival reaction has a greater diagnostic value than the subcutaneous reaction. At first we considered them of equal value, but comparative examinations in about 100 cases have convinced us of the greater clinical value of the conjunctival reaction.

The inherent difference between the tuberculin local reaction and the subcutaneous method lies in the pro-

*Read by invitation at the meeting of the New York Pathological Society, Oct. 14, 1908.

duction of a typical tuberculin reaction far from the seat of the existing disease, that is, the avoidance of the lighting up of a fresh process at the seat of the original lesion. The rise of temperature in the subcutaneous method is not the element of danger, but the starting up of activity at the seat of the old lesion is the serious consequence, a process the progress of which can not be limited. In the recognition of this specific advantage of the conjunctival reaction the contraindications become evident; to these I have adhered from the beginning, having neglected them only once, in consequence of an error. In a paper read before the Berlin Ophthalmological Society, Jan. 7, 1908, I stated the contraindications. This was before the time when unfortunate experiences proved the correctness of my theoretical deductions. The prevention of reaction in the primary focus of the disease is the cardinal point.

Therefore, the conjunctival reaction is contraindicated if the eyes are or have been the seat of tuberculous diseases, or even if there is a suspicion of the existence of such lesions in the eye. Again, the application of the conjunctival reaction in an eye which has reacted is inadmissible and useless, because it would bring about a reaction at what is practically a tuberculous focus. This would not have any diagnostic value. It would act just like a cutaneous reaction, indicating a process which may have been latent. Another contraindication lies against the use of too concentrated preparations, especially the so-called "test" preparations. Their harmfulness especially appears when, as sometimes occurs, the conjunctival reaction is contraindicated for one of the reasons given above.

I recommend for use for the conjunctival reaction the "Ruete-Enoch tuberculin* for ophthalmo-reaction" in 1 to 2 per cent. solution, the efficacy and safety of which I have tested; as to its activity I can vouch. With more concentrated solutions better statistics can be obtained, because in persons with active tuberculosis a higher percentage of positive results will be produced. But I consider such statistics valueless, because they enforce a reaction in cases which are clinically evident.

In cases of tuberculosis in the early stages the reaction used according to my directions gives such distinct signs that no reason exists to vary my form of using the reaction, so often proved to be absolutely harmless. (A negative result of conjunctival reaction, in using the solutions I suggest, gives important prognostic evidence which is not to be obtained by the use of other concentrations.)

I admit freely that ophthalmologists are competent to judge the value of the conjunctival reaction, but they must recognize the above-mentioned contraindications and must get their experience from general medical cases. I am sorry to say that the ophthalmologists have hardly ever studied the contraindications, in consequence of which the conjunctival reaction will become prominent only after overcoming many prejudices founded on ophthalmologic publications.[1] It is not a mere coincidence that the ophthalmic clinic of Silex obtained very favorable results by using the method exactly according to my directions (tests made by Erlanger).

I have already said that the conjunctival reaction can be employed in diagnosis in internal medicine. But you will hear occasionally that the reaction is uncertain because it may be negative in tuberculous patients and positive in clinically healthy persons. This only confirms my statement and shows the clinical inexperience of the observer, because he does not appreciate that these negative reactions may be found in consumptives and that healthy people who give positive conjunctival reactions should be regarded with ten times as much suspicion as those who react positively to a subcutaneous injection of tuberculin. And you know that many clinicians consider even such a subcutaneous reaction as quite important from a diagnostic standpoint.

Mistakes are also made concerning my opinion that there is a prognostic value to the reaction. Nevertheless, I can state that this opinion, so seriously opposed, is coming slowly but surely to the front. Therefore, I am anxious to correct mistakes in literature. I declared that a negative conjunctival reaction is to be taken as evidence of unfavorable prognosis in manifestly tuberculous individuals (where bacilli are found), but I never said that a positive reaction indicates a favorable prognosis. Furthermore, I never stated that a negative conjunctival reaction occurring with a positive subcutaneous one indicated an unfavorable prognosis. In such cases I decide on a latent tuberculosis, while Röpke[2] actually states that I believe the opposite. This can be satisfactorily explained by the fact that Röpke and I differ[3] in the interpretation of what constitutes an active tuberculosis.

The prognostic conclusions of Teichmann and myself[4] are based on the course which the cutaneous reaction pursues. I wish it clearly understood that the prognostic deductions which I pointed out from the first have at least as great importance as the diagnostic ones, and have not been changed in any important features. This prognostic application is the reason why I practice both the cutaneous and the conjunctival reaction in all cases at the same time.

There is not, as may seem, anything mystical about making the prognosis depend on the course of the reaction. Let us consider a continued reaction (*Dauerreaction*) which indicates, according to my conclusions, a cure or a favorable course. Such a reaction indicates that at the point of reaction the tuberculous poison causes a connective tissue formation. It is only necessary to suppose that the seat of disease reacts or has reacted in the same manner through the incorporation of these poisons, and then the result obtained by the continued reaction is easily understood. It is not to be wondered at if empirical observations have led to the same conclusions.

Here we find a strictly logical state of facts whose correlations are not at first recognizable. Wolfson and I have made a great number of opsonic examinations, and we arrived at the conclusion that this trying procedure gives no better diagnostic results than an exact clinical examination in combination with the use of local reactions. The control of a tuberculin treatment by the determination of the opsonic index is another matter.

We supposed that we would find a high opsonic index in cases of strong tuberculin reactions, and particularly in cases showing a *Dauerreaction*. This was not at all the case, and it only gradually developed why this was

* Manufactured in Hamburg, Hermannstrasse, 5.

1. Die Gefahren der Ophthalmoreaction und ihre Vermeidung, Wien. klin. Wchnschr., 1908, No. 33.
2. Beitr. z. Klin. d. Tuberk. (Brauer's), ix, No. 3.
3. Röpke and Wolff-Eisner: Beitr. z. Klin. d. Tuberk., 1908, x, 2.
4. Die prognostische Bedeutung der cutanen und conjunctivalen Tuberkulinreaction, Berl. klin. Wchnschr., 1908, No. 2.

so. A high opsonic index is produced by absorption of tuberculous poison from the focus of disease. This is prevented by the formation of connective tissue and explains, therefore, the absence of a high opsonic index.

These opsonic experiments, together with our experiments concerning the binding of complements in tuberculous subjects,[5] prove that the poisons from the tubercle bacilli are absorbed, being identical in their effect with tuberculin. This fact is of great fundamental importance, because it explains the difference in the opinions of many observers which could not otherwise be explained. It is well known that to-day there are adherents and opponents to the tuberculin treatment, both from a diagnostic and therapeutic standpoint, the one side continuously reporting injurious effects which have not been observed by others.

The above-mentioned facts demonstrate that when a patient is injected with tuberculin the same process takes place in him which would eventually develop as the result of absorption of tuberculin from his own tuberculous lesions. Under these circumstances it is dependent on the point of view of the observer whether he holds the tuberculin injection or the disease itself accountable for the result. The same fact explains, it seems, what is apparently paradoxical, that the statistics of the adherents of tuberculin do not differ greatly from those of its opponents. I wish to state, in passing, that no good basis exists for the compilation of statistics of pulmonary disease. I shall discuss this on another occasion.[6]

Inasmuch as in all tuberculous subjects tuberculin appears in the circulation, it can be easily understood that the results with or without tuberculin treatment can not differ very materially. It will remain for the future to determine which individual will require a tuberculin treatment. The observation of the local reaction, the study of the opsonins and the clinical course of the illness will be the determining factors.

Numerous experiments, the observation of local reactions and the work of others have convinced me that there is a certain immunity to tuberculosis, an immunity against poisons which have become soluble and another against the bacilli themselves. The latter is most likely a bacteriolytic one. The immunity against poisonous matter, freed by lysis, is not an antitoxic one, but corresponds to the mechanism of the natural immunity against toxins which I have recently described.[7]

The toxin immunity of the naturally non-susceptible animal consists of the binding of the poison by organ receptors. (This stands in contrast to active immunity of an animal originally susceptible.) If endotoxins are bound, as described above, for natural immunity, the fixation seems often to occur by means of the receptors in connective tissue.

Two cases will illustrate this. The cutaneous reaction was applied to both subjects. They then received 1, 3 and 5 mg. tuberculin by subcutaneous injection and reacted with increasing fever. When 7 and 9 mg. were used, the general reaction did not occur, but in place of it an intense inflammation of the old cutaneous reaction appeared (in one case erysipelas and in the other an intense furuncle). I have repeatedly produced these phenomena in cattle. Their interpretation involves great difficulty and is only possible for those who have an experimental training in the fundamental work of natural immunity against toxins. The tuberculin, which has probably been made absorbable by lytic processes, is carried to those points at which the receptors are located. These are essentially the foci of disease, but other places can act as foci with receptors. If all the tuberculin is bound here, a tuberculin injection will cause a local reaction. If it is only partially bound there will be a weakened or delayed reaction and a late general reaction. We are thus enabled to protect the general organism from the influence of the tuberculin poisons by directing their action to less vital tissues, as, for instance, connective tissue, and we shall probably be enabled to make therapeutic use of the fact. Taking it for granted that the production of such receptors in the connective tissue will be of most advantage, and considering the numerous observations made by Holländer, Joseph and others, that certain forms of skin tuberculosis preclude tuberculosis of the lungs, we can understand[8] that after an injection of tuberculin the local reaction can appear before the general reaction, or even that the general reaction that is to be expected, does not appear at all or is influenced by its progress. For some time past I have been enabled by intracutaneous injections of small doses of tuberculin, or through the inunction of tuberculin ointment, to obtain in patients with lung disease artificial skin foci. In my second edition of my "Ophthalmodiagnose"[9] it is my intention to give more accurate reports of the fundamental principles involved in this therapeutic measure, but I shall not allow myself to be misled into reporting successful results too soon.

It can be easily seen how in this field purely theoretical are most intimately connected with practical results, of which the conjunctival reaction, the initial step in our observations, is the most palpable proof.

I should like to call the attention of veterinarians to the fact that the application of the conjunctival method in cattle presented points of extreme difficulty. In the experiments that I have made with the aid of the royal Prussian agricultural department, the principal difficulties have been overcome. It is to be hoped, therefore, that in the veterinary practice the conjunctival reaction will be developed in as exact a degree as in the human species.

SUMMARY

Let me give a summary of my remarks:

1. The subcutaneous and the cutaneous methods are specific reactions for tuberculosis. As they both demontrate active and latent tuberculosis, their use is extremely limited for clinical diagnosis.

2. The positive conjunctival reaction shows only active tuberculosis.

3. The conjunctival reaction in clinically healthy individuals makes the suspicion that they are affected particularly strong.

4. A negative result in those manifestly tuberculous justifies a bad prognosis.

5. In advancing tuberculous disease negative reactions become more frequent.

6. A positive conjunctival reaction does not justify a good prognosis, but this is the case only in the so-

5. Ueber Ergebnisse der Komplementablenkung mit Tuberkelbazilienderivaten als Antigen bei Tuberkulose und Infektionskrankheiten, Wien. klin. Wchnschr., 1908, xxi, No. 37, p. 1296.

6. Die Bedeutung der lokalen Tuberculinreactionen für die Heilstättenfrage, Ztschr. f. Tuberk., December, 1908.

7. Die Bindungsverhältnisse der Organgewebe gegenüber Toxinen, Centralbl., 1908, xlvii.

8. c. f. Wolff-Eisner: Ophthalmodiagnose, Würzburg, 1908.

9. Issued January, 1909, by A. Stuber, Würzburg, and entitled "Frühdiagnose und Tuberkuloseimmunität."

called *Dauerreaction* (continued reaction), a form of the cutaneous reaction.

7. It is possible to create receptors in tissues that are indifferent as regards life, such as connective tissue, these receptors attracting tuberculin and localizing the toxic action. This observation is of therapeutic value.

SUPPLEMENTARY REMARKS

My paper could not include all the investigations concerning the theory of the action of tuberculin, especially the lytic theory of the tuberculin reaction. Some facts are given in the first edition of my book, which was published in New York by Wood & Co., Oct. 10, 1908; new facts will be found in the *Berliner klinische Wochenschrift*, 1908, No. 30, p. 317. The second German edition will be published as mentioned above.

When I read my paper at the meeting of the German Medical Society last week, the chairman pointed out that the name "ophthalmo-reaction" is a misnomer for several reasons. At the same time he stated my absolute priority. At the same meeting he said that I came to America to stand up for my rights. This was not my intention, because I thought that there was no necessity; but while in the library of the Rockefeller Institute reading about one hundred papers of the American literature concerning the matter, I found only Calmette mentioned. I claim that I made known the conjunctival reaction in a discussion of the first paper of von Pirquet on May 15, 1907, while Calmette made his communication to the Academy of Sciences, June 16. To Calmette belongs the credit of having greatly assisted in having the reaction quickly adopted by the profession.

There can be no question about these facts; Calmette himself points out that the paper of von Pirquet was the cause of his investigations, and this paper contains my communication about the discovery of the conjunctival reaction. It is not generally known that on the same day on which Calmette read his paper, Vallée also read a paper concerning conjunctival reaction in cattle in which he stated that his investigations were undertaken in connection with my discovery.

I am glad to state that there is no point of difference between Calmette and myself after his publication at the International Tuberculosis Congress in Washington, but only with his above-mentioned investigators. I would like to suggest to him the appropriateness of calling the reaction by the names of both authors.

Of greater importance to me than the question of the priority of the discovery of the reaction is the part I took in building up the scientific structure which is based on it and its application for the prevention of tuberculosis. I should be only too glad to work harmoniously with all those who have the same aim.

There is no difficulty in applying the reaction, but the matter is not as simple as it may appear. It took my collaborators several months before they were able to carry out my intentions. In cases in which there is a contradictory result with the reaction, it is absolutely necessary to compare the results with the findings of the physical examinations in order to avoid the wrong interpretation. I should like to have any one who can not exclude apparent contradictions bring the matter before me. Many a physician has come to me with a very critical point of view, but no one has departed unconvinced.

Berlin, N. W., 8 Albrechtstrasse.

Principles of Animal Nutrition.—The natural foods of all species of animals contain more or less proteids, mineral matter, fats and carbohydrates. No matter how widely the forms of food eaten by different kinds of animals may differ, they will be found to contain these essential basic nutritive elements. The problem of nutrition is the same in all animals so far as the principle goes, but there is a great variety of methods by which the necessary food elements are obtained and digested, each species having organs specially adapted for securing and digesting its natural food.—G. R. Pisek, in *Amer. Jour. Obst. and Dis. of Women and Children.*

THE SURGERY OF SYPHILIS*

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The time allotted to me will not suffice for more than a brief survey of the conditions demanding surgical intervention occurring in syphilis.

I first desire to emphasize the fact that many practitioners overlook most brilliant opportunities in the treatment of syphilis by regarding the disease too specifically. In other words, when they meet a condition which does not yield readily to antisyphilitic medication they appear to be helpless. As I will endeavor to demonstrate, there are many instances in which radical measures of a surgical character constitute the primary indication, internal medication occupying an almost secondary position in the cure of the given lesion. It is, of course, acknowledged that in such cases, once the lesion is under control, specific medication is a *sine qua non* to complete the cure of the constitutional condition and prevent recurrence of the lesion.

CHARACTER OF LESIONS WHICH REQUIRE SURGERY

The initial lesion *per se* rarely requires the knife. Time was when some of us were hopeful that excision of the initial lesion would at least modify the subsequent course of the constitutional condition. A large experience in this direction in an experimental way convinced me long ago that such hopes were ill-founded. An occasional case arises in which the induration of the initial lesion is very persistent, defying specific medication for a long period. Under these circumstances the persistence of the lesion may be very embarrassing, especially as regards the marital relation and the necessity of concealing the patient's condition from those about him. Here a clean free excision of the indurated area is sometimes of great advantage. It must be remembered, however, that unless the primary lesion has fully matured, induration is likely to recur in the incision, forming a chancre much more formidable than the original. The more thoroughly the patient has been treated by mercurials before the excision has been made, the less likelihood there is of its recurrence. The most frequent condition calling for surgical intervention in primary syphilis is concealed chancre or a mixed sore, with phimosis.

I long ago ceased delaying in cases of this kind, and am convinced that the risk of extensive infection of the wound in case a mixed sore exists, which, by the way, can not always be proven by autoinoculation, is much less than by allowing the lesion to progress without diagnosis or proper treatment. So far as my own experience goes, I have never had occasion to regret a dorsal incision of the prepuce for the purpose of freeing the glands and inspecting and treating the concealed lesion.

Marked edema occurring in the course of chancre sometimes demands multiple punctures for drainage. Where the edema is persistent and the lesion is true chancre, this method is preferable to allowing the edema to be replaced by connective tissue hyperplasia and extensive integumentary induration—circumstances which demand the knife later on.

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* Read before the South Side Branch of the Chicago Medical Society in a Symposium on Syphilis, Oct. 29, 1908.

In mixed sores and superadded pus infections of the initial lesion, with or without chemical or traumatic irritation, syphilitic lymphatics may be followed by abscesses in the course of the lymphatics of the penis. Obviously incision is demanded here.

It is hardly necessary to state that syphilitic bubo *per se* does not require surgical treatment. When chancroidal, pus, or tuberculous infection is superadded to the syphilitic, the knife is, of course, necessary.

I wish to make a special plea here for thorough extirpation of the infected glands; half-way measures are not, in my experience, productive of good results.

The surgery of secondary syphilis is in general still more limited in its scope than that of primary. Cases arise, however, in which edema of the genitals followed by permanent induration requires the use of the knife. These conditions rarely arise in well-treated patients, who are leading fairly correct lives and whose surroundings are hygienic. Occasionally in the course of secondary syphilis obstinate mucous patches and ulcers may do well under light curettement. Various conditions of the jaws and teeth bear a very important relation to mucous patches and ulcers and require surgical treatment.

As time goes on in cases of uncured syphilis surgery is likely to assume a more and more important position in the management of the case. The same condition of indurating edema to which I have already called attention is often met with in broken-down patients suffering from tertiary syphilis. The connective tissue hyperplasia not infrequently results in the formation of extensive tumors about the genitalia, tumors which have been mistaken for malignant disease or simple new growths of a non-syphilitic character. Indeed, the hyperplasic tumors may readily be said to be non-specific, inasmuch as they are sequelæ of syphilis rather than due to syphilis *per se*. They may persist long after the constitutional luetic condition is under control. The mistake is very often made of giving large doses of mercury and iodid of potassium for a prolonged period in these cases, in the fruitless attempt to cure a lesion which is no longer syphilitic, but of a purely surgical character and should be dealt with just as any other new growth would be dealt with.

Huguier long ago called attention to cases of this kind under the generic term of esthiomene. The late R. W. Taylor wrote a most classical treatise on this class of cases. I have at various times written papers along similar lines.

Broken-down hospital patients with chronic chancroid and old syphilitic infection are more likely than any other class of patients to develop connective tissue tumors about the genitalia. Gumma in certain situations should be treated surgically more often than is the custom. I believe that obstinate gumma of the brain, in which accurate localization is possible and the symptoms do not yield quickly and satisfactorily to internal medication, should be operated on, that is, they should be treated like any other tumor in the same situation. Obstinate gumma of the skin or other accessible situations should be removed by the knife more often than they are. It is by no means unusual in my experience to meet patients who have been dosed to the verge of the grave by mercury and iodid of potassium in a vain attempt to cause resolution of a gumma which a clean operation with the knife would have speedily removed. Many such patients need no specific medication, for, as a rule, they have had enough and to spare of that, but demand good food, fresh air, tonics, and steel in the form of the surgeon's knife.

What I have said of simple gumma is, in my opinion, true of stubborn gummy ulcers. If the indurated area underlying these ulcers be cut away, healing is likely to be very prompt, always providing the constitutional management of the case has been conducted judiciously. Be it understood, I am not recommending the knife as a cure for syphilis, but as a substitute for irrational over-medication in cases in which the patient is suffering not from syphilis *per se* but from sequelæ of the disease.

In syphilitic bone disease more barbarities are inflicted on the sufferer by overdosing with specific remedies than in any other lesion occurring in syphilis. Cases of syphilitic periostitis in which the node is accessible obviously demand constitutional treatment; but if they do not yield readily the knife should be freely used. Many a case of extensive caries and necrosis results from the practitioner's ignorance of ordinary surgical principles in the management of syphilitic bone disease. When caries and necrosis have occurred, nothing could be more absurd than an attempt to cure the bone condition by internal medication, and in nearly all of these cases the patient is overdosed. Mercury and iodid of potassium must, of course, be the mainstay in the constitutional condition, but the local condition should be treated on its merits as though it were due to causes other than syphilis.

THE REPLACING OF GUMMATA AND ULCERS BY MALIGNANT DISEASE

I wish to call attention in passing to the frequency with which gummata and obstinate ulcers of the tongue are transformed into or, more accurately speaking, replaced by malignant disease. I have had a large series of cases under my observation in which ignorance of this fact has resulted in the loss of the golden opportunity for the cure of the case by surgery. In most of the cases that have come under my care the patient has been dosed for months and perhaps years for syphilis. If microscopic examinations of the tongue have been made the result has been either doubtful or negative, and so the practitioner has gone on and on with his iodid and mercury and the patient has got no better rapidly. Be it noted that in this class of cases mercury and iodid of potassium are not only beneficial but very injurious. In one case in which I operated for removal of the tongue the patient had been under constant observation for three years, and about ten or eleven microscopic examinations of the tissue of the tongue had been made by different experts, the reports on which were negative. I made a diagnosis of probable epithelioma of the tongue and of undoubted malignant disease. My diagnosis was received with great incredulity simply because the judgment of the surgeons who had examined the tongue was clouded by the undoubted fact that the process under consideration was a continuation of syphilis of the tongue. Four days after my examination hemorrhage came on, which was so severe that an emergency operation was performed and the tongue removed. Extensive sections unequivocally demonstrated epithelioma.

In another recent case in which I removed the tongue one expert who examined the tissues microscopically pronounced the process benign; the other pronounced it malignant. I pronounced it "surgical," and removed

the tongue. Sections after removal plainly showed the process to be epithelioma.

In another case of my own occurring some years ago I had the patient under observation for nine or ten years, during which time he had recurrent attacks of gumma of the tongue. The gummy infiltration left circumscribed tumors here and there in the substance of the organ. He passed from under my observation and some months later, while at Hot Springs, Ark., severe ulceration of the tongue came on and the tissues began to break down very rapidly. Internal medication and baths having only a bad effect, he was referred back to me. An examination by an eminent microscopist was negative, but I removed the entire tongue, with the galvano-cautery, just the same. Extensive sections and microscopic examination after removal showed the process to be sarcomatous. Recurrence occurred about six months later in the glands of the neck; there was erosion into some large blood vessel, and the patient died suddenly of hemorrhage.

So many cases of a similar type have come under my observation that I have no hesitancy in saying that the profession as a whole is woefully negligent and unobserving in this particular class of cases. I have arrived at the point where, when the microscope is guessing, I am perfectly willing to hazard my reputation by playing the only surgical trump at my command and removing the tongue. I will say in passing that the removal by surgical measures of the hyperplastic nodules and thickened areas of the mucous membrane of the tongue resulting from gumma, ulcers and mucous patches will, if performed early, prevent many of the serious conditions of the organ encountered in tertiary syphilis.

CONCLUSIONS

I wish again to emphasize the fact that lesions due directly or indirectly to syphilis should not always be regarded as specific from the standpoint of treatment. They often demand surgical intervention, based on the merits of the particular lesion, and more or less independent of the constitutional infection, so far at least as rational treatment is concerned.

In conclusion I wish to say that operations on syphilitic patients in whom the constitutional disease is under complete or fair control by specific medication are likely to result in primary union of the wound just as though syphilis did not exist. In clean aseptic incised wounds repair will often occur quite as rapidly as in non-syphilitic subjects. In open wounds or in chronic non-specific lesions occurring in syphilitic subjects, where irritation is marked and persistent, the syphilitic constitution unquestionably retards repair. Here the rational employment of mercury and iodids is an indispensable adjuvant to the knife. Briefly, I might say that in chronic syphilitic lesions requiring the knife surgery is the handmaiden of specific therapy. In operations on non-specific conditions occurring in syphilitic subjects the importance of respective rôles of surgery and therapeutics is reversed, the knife playing the principal and therapeutics the secondary rôle.

100 State Street.

Curds in Infants' Stools.—F. B. Talbot in the *Boston Medical and Surgical Journal*, states that small curds are composed mainly of fat, mostly in the form of fatty acids and soaps. There is no evidence that they contain casein-like material, and like the normal stool, they have a low percentage of nitrogen. They represent the fat in food rather than the protein.

THE RELATION BETWEEN PSEUDOHEMISYSTOLE AND DROPPED BEAT

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Owing to the recent advances in the methods of investigation of the physiology of the heart, many interesting studies have been recorded and numerous hitherto doubtful phenomena have been explained. Special attention has been paid to the disturbances of the heart in those conditions known as "heart block," "arrhythmia" and "hemisystole."

It is our intention to present briefly a clinical study showing the relation between the so-called dropped beat and pseudohemisystole. Hemisystole is a condition allied to cardia bigemina, in which, during the second beat of the heart, the left ventricle fails to contract. This phenomenon was first described by V. Leyden;[1] Unverricht[2] next showed the relation between cardia bigemina, hemisystole and systolia alternans. The relationship of these conditions is shown in the following outline taken from Sahli:[3]

Condition.	Cavities.	First Beat.	Second Beat.
Cardia bigemina....	Right heart.	Effective.	Effective.
	Left heart.	Effective.	Effective.
Hemisystole.....	Right heart.	Effective.	Effective.
	Left heart.	Effective.	Ineffective.
Systolia alternans..	Right heart.	Ineffective.	Effective.
	Left heart.	Effective.	Ineffective.

Although hemisystole has been observed in the exposed hearts of animals, most authors deny the possibility of its occurrence in man, except in the hearts of the dying (Mackenzie[4]). Most observers explain its occurrence in man (with Riegel[5]) on the basis that the left ventricle does not fail to contract but contracts ineffectually, thus being a pseudohemisystole.

MECHANISM OF ARRHYTHMIA

As pseudohemisystole is a form of heart irregularity, let us briefly consider the mechanism of arrhythmia. According to the studies of Wenckebach, Cushny and Mackenzie, arrhythmia is usually caused by the occurrence of a premature or extrasystole; these systoles are always excited by unphysiologic irritations. As is well known from experiments, the heart, shortly before its systole and lasting for a short period after, is in a condition of non-irritability; this period is known as the refractory phase. The irritability of the heart increases as the diastole advances. From what has been said it is clear that if a stimulus is liberated early in the period of diastole or, in other words, soon after the refractory phase, the heart will beat ineffectually, the inefficiency depending on the time the stimulus is liberated; should this occur very soon after the refractory phase the heart beat will be futile and will not propagate a pulse wave. This constitutes a dropped or missed beat. Marey very well illustrates this in the following diagram (Fig. 1),

1. Virchow's Arch. f. path. Anat., 1868, xliv.
2. Berlin. klin. Wchnschr., 1890, xxvi.
3. Diagnostic Methods, p. 296.
4. Study of the Pulse, 1902, p. 292.
5. Deutsch. Arch. f. klin. Med., xxvii, 393; Samml. klin. Vortr. (Volkmann's), No. 227.

in which the dotted line shows the pressure necessary to open the aortic valves and consequently produce a pulse wave.

Premature systoles causing dropped beats may occur regularly or irregularly; the regularity may assume various groupings, as every other beat, every third beat, etc. If it occurs regularly every other beat we have a condition in which the heart beats in groups of two (bigeminus), the second contraction not propagating a pulse wave, these manifestations being likewise the characteristics of pseudohemisystole. The two cases to be described we have selected as illustrations, the first showing an irregularly intermittent dropped beat, the second a regularly consecutive dropped beat. The first

Fig. 1.—Diagram illustrating arrhythmia (dropped or missed beat). The dotted line shows the pressure necessary to produce a pulse wave.

preserves, during the intervals of drop-beat, the same relationship between the venous pulse, cardiac cycle and arterial pulse as is regularly shown in Case 2.

The tracings of Case 1 (Figs 2 and 3) show the gradations from ordinary extrasystoles, the ventricle contracting effectually to a condition of ineffectual ventricular contraction or dropped beat. In Figure 2 we have a gradually decreasing efficiency of the ventricular contractions illustrated by the smallness of the pulse wave corresponding to the extrasystoles. The jugular pulse is of the auricular type.

In Figure 3 is shown the ultimate result of the progressively increasing inefficiency of the left ventricle

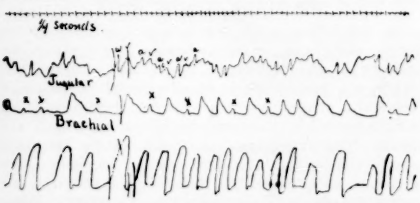

Fig. 2.—Tracing of heart action. Case 1. Gradually decreasing efficiency of the ventricular contractions illustrated by the smallness of the pulse wave corresponding to the extrasystoles. In tracing of jugular pulse (of the auricular type) a indicates auricular wave; c, the carotid wave, and v, ventricular wave. In tracing of brachial pulse, x indicates dropped beat.

during the extrasystole, and there is seen a condition in which there are two apex beats, to the second of which there is no corresponding arterial pulse and a double venous pulse of the auricular type.

The tracing from Case 2 (Fig. 4) shows constantly the above conditions, namely, a double apex beat, a single arterial beat and a jugular pulse showing a double auricular beat; that these findings indicate a double contraction of the heart is evident from the double apex beats, that the auricles participate in the double contraction is shown by the double venous pulse, that the left ventricle contracts ineffectually is shown by the want of an arterial pulse during the second beat. From the above it is clear that we are dealing with a case of pseudohemisystole. On one occasion during a marked irregular action of the heart several tracings were obtained showing not only extrasystoles with normally transmitted pulse waves but single extrasystoles

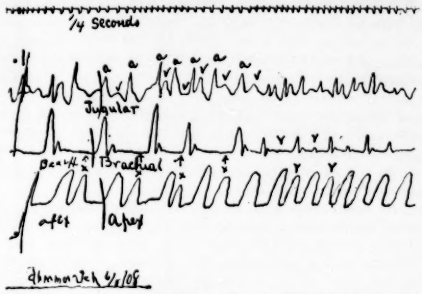

Fig. 3.—Tracing of heart action. Case 1. Progressively increasing inefficiency of left ventricle during extrasystole: two apex beats, to the second of which there is no corresponding arterial pulse and a double venous pulse of the auricular type. In jugular, brachial and apex tracings, a, c, v and x indicate same as in Figure 2; y indicates extrasystoles propagated.

with a dropped beat and double extrasystoles with a dropped beat within a short period of time.

Of special interest in Case 2 is the fact noted that the administration of atropin completely changes the character of the pulse; the ineffectual ventricle functionating properly, propagates an arterial pulse, and we have the tracing shown in Figure 5. This result was obtained by the administration of 1/50 gr. of atropin hypodermatically, and the condition lasted for five minutes; in spite of repeated attempts a jugular

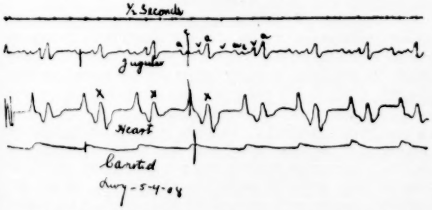

Fig. 4.—Tracing of heart action. Case 2. Double apex beat, single arterial beat, and a jugular pulse showing a double auricular beat; a, c, v and x, indicate same as in Figure 2.

tracing could not be obtained during this period, probably due to the fact that as the heart was functionating properly there was no engorgement of the right side of the heart. During a period of administration by mouth of 1/100 gr. atropin thrice daily for a few weeks the same condition was presented several times a day. During this period it was noted that exercise and rest influenced the action of the heart, the former inducing an increase in the pulse wave, each wave corresponding to an apex beat, the latter causing the heart to assume its former condition of ineffectual contractions.

It will be noted in the synopsis of Case 2 that over the apex are heard three sounds: *Lubb—Dupp—Dubb*, with each double heart beat; that the absence of the second beat is due to an ineffectual ventricular action is shown by the appearance of four tones, two to each beat of the heart during the above described action of the heart under the influence of atropin. It was noted in Case 1 that during the period of dropped beats there was heard at the apex a tumbling action of the heart, which, when all systoles were effectual, was replaced by a blowing systolic murmur.

From the evidence that extrasystoles can produce dropped beats as in Case 1, and the occasional occurrence of indisputable extrasystoles in Case 2, we infer that the regularly consecutive dropped beats of Case 2 are due to premature extrasystoles which were insufficient to open the aortic valves and thus cause a pulse wave.

CASE 1.—*History.*—A. A., is a watchman by occupation, married. Family history is negative; uses alcohol moderately, smokes excessively and takes tea and coffee moderately. Present illness began five years previously with loss of appetite, vomiting, epigastric pains, dyspnea, cough, heaviness after eating, swelling of the feet, palpitation and occasional precordial pains, all of which the patient still complains of.

Examination.—Patient is fairly nourished, skin of face and extremities cyanotic, superficial venules distended. Patient is

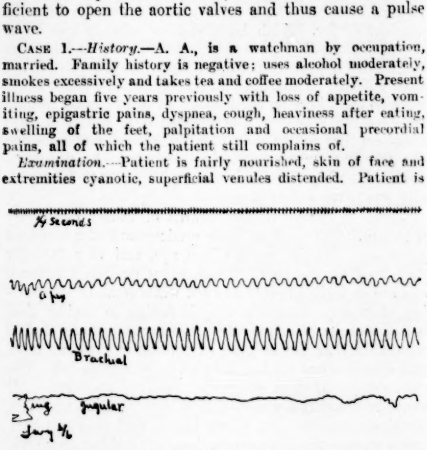

Fig. 5.—Tracing of heart action, Case 2, obtained after administration of atropin.

dyspneic, respiration 30. Chest is barrel-shaped, and capacious. Apex beat is seen in the sixth space, seven inches from the mid-sternal line. It is most conspicuous over an area of 1½ inches, acts in a see-saw fashion, and spreads concentrically to the fifth and seventh spaces, and at times even to the fourth space. Heart action is very irregular; dropped beats are present at frequent intervals; the pulse rate varies from 40 to 80, pulse is soft and there is a high grade of arteriosclerosis and visible locomotion. Systolic pressure, 120; diastolic, 80 (Erlanger). A well marked jugular pulsation is constantly observed. Percussion shows the upper border at second rib and right border at right edge of sternum; left border in the sixth interspace reaches to one-half inch within the anterior axillary line. A blowing systolic murmur is audible at irregular intervals, transmitted into the axilla. It is found that the murmur occurs only when the heart produces a radial pulse, and is absent when the beats are dropped during the latter period the heart's action is tumbling. Lungs show a high grade of emphysema. Fingers are clubbed and finger nails curved. Legs are slightly edematous. Urine shows trace of albumin.

CASE 2.—*History.*—S. L., aged 34, is by occupation a presser; married. Family history is negative; uses alcohol regularly and sexually immoderate. Had gastroenteric disturbances twelve years ago. Present illness dates back seven months, commencing with pains in the joints and weakness in the extremities. At present he complains of pains in the joints when active. It is well to note that, despite the peculiar action of the patient's heart, he is apparently very slightly affected by it.

Examination.—His general development is good; chest and lungs negative. The apex beat is felt and seen in the fifth interspace within the nipple line. Area of dulness increases downward and to the left. Three sounds are audible at the apex, but no murmurs; first sound is muscular in quality, followed by two sounds in rapid succession. At the base the same sounds are also heard. Pulse rate is 42, radial artery slightly thickened. Systolic pressure, 150; diastolic; 115 (Erlanger). Pulsations in the jugular is distinctly visible. Blood and urine examination negative.

CONCLUSIONS

1. From our observations in numerous cases of cardiac arrhythmia, dropped or missed beats occurring from time to time are not rare. Such exquisite types as we have illustrated above are, however, exceptional.

2. A condition demonstrating the mechanism of pseudohemisystole is observed in irregularly acting hearts during the periods of consecutively dropped beats.

3. A regularly consecutive dropped beat constitutes pseudohemisystole.

4. That this condition is not due to disturbances of conductivity is shown by the response of the ventricle to the action of atropin.

5. The absence of a second sound to the second beat, so well shown by Case 2, is due naturally to the non-closure of the unopened aortic valves.

6. The absence of a murmur during the period of dropped beat in Case 1 further demonstrates an ineffectual ventricular contraction, since the force exerted was insufficient even to cause a regurgitation of blood into the auricle and produce a murmur.

7. From a study of jugular tracing in both cases it is evident that the disturbance is caused by premature ventricular beat, as the auricles maintain their rhythm (see large auricular wave during irregular period and the absence of ventricular radials during these periods).

We take occasion to express our thanks to Dr. S. Wachsmann, medical director of Montefiore Hospital, for calling our attention to these cases.

Broadway and One-Hundred and Thirty-Eighth Street.

THE MEDICAL SOCIETY AND THE MEDICAL MEN OF ONE HUNDRED YEARS AGO *

LOUIS W. FLANDERS, M.D.
DOVER, N. H.

That medicine is an all-absorbing profession is a trite saying. If we were to bring two doctors into this room, the one from the coast of Maine, the other from the coast of California, the chances are more than even that they would be talking medicine within ten minutes. The one would brag a bit over a cure he had effected when recovery seemed impossible, and when even Dame Nature herself was wringing her hands in despair; the other would shake his head gravely over the mistaken diagnosis of a brother practitioner, a diagnosis that should have been as plain as the nose on one's face, and which was instantly made by the narrator when called in consultation. These little preliminaries settled, both would begin to discuss cases in which the patients obstinately refused to be cured in spite of diagnostic skill or scientific treatment.

* Read at the centennial anniversary of the Strafford County and District (N. H.) Medical Society.

In order that medical men might do these things on a larger scale, societies were organized. The physicians of New Hampshire united in 1791 to form a state society, and seventeen years later the Strafford District Society, whose centennial we celebrate to-day, had its inception. In the summer of 1808 Caleb Morse, Ichabod Shaw, Joseph Boyer and Asa Crosby sent a circular letter to all the physicians of Strafford County, inviting them to assemble in Rochester on the 6th day of July to form a county medical society. Twenty-three men responded to the call. We find on the records of that day such names as Caleb, Jedediah, Ichabod, Zadoch, Jabez, Abner and Timothy. Surely, boys with names like these must have been sober-minded youngsters; and they have left plenty of evidence to prove that they became serious, hard-working men. Listen to the preamble of that circular letter:

"As health is essentially necessary to the happiness of society, and as its preservation or recovery is closely connected with the knowledge of the animal economy and of the properties and effects of medicines; and as the benefit of medical institutions formed on liberal principles, and encouraged by the patronage of the law, is universally acknowledged, we do, therefore, agree to be governed by the following, to-wit:" and here follows the order of business of the day.

Surely, those lines are full of the spirit of good will toward men, and they show a laudable desire for greater proficiency in the chosen profession, a proficiency which was to be attained by coming together at stated intervals for a mutual interchange of experience. The members looked to the New Hampshire State Medical Society for that "patronage of the law" set forth in the preamble, and immediately petitioned that body for permission to establish a subordinate society. Evidently consent was not easily obtained, for at the annual meeting of 1810 it was voted that a committee should press their claim on the state society and in the event of failure said committee was instructed "to prefer a petition to the legislature at their next session in June to obtain a charter for a separate institution for medical purposes."

Realizing at last that her children were in earnest, the mother society, at the annual meeting held in Exeter, in May, 1811, chartered this present body under the title of "The Strafford District of the New Hampshire Medical Society." The association was now fairly launched and held three meetings each year, one at Dover, which was always the annual meeting, and two others at places agreed on previous to adjournment. In one instance the society voted to adjourn to meet again "as near Gilmanton Corner as may be convenient." Fortunately, this was the last meeting before the reconstruction; otherwise the services of a land surveyor might have been necessary to determine the exact spot for assembling. These early years seem to have been characterized by inordinate zeal. It was voted that every member should present something of interest at each meeting of the society, a vote that was soon reconsidered, for it caused an alarming percentage of absentees. A system of fines was instituted. An officer was assessed $1 for each absence from the meetings, and members were charged 50 cents for a similar negligence. Dr. Jabez Dow was appointed in 1813 to interview every member concerning his experience with lobelia inflata and hemlock gum, and to give a dissertation on these two agents at the next annual meeting. In 1814 Dr. Jabez Dow begged for more time. In 1815 he confessed that he was still unprepared and was granted a further extension. In February, 1816, lobelia inflata, true to its physiologic action, came up again, and this time Dr. Dow was excused from further service. It is interesting to note, however, that Dr. Asa Perkins immediately grappled with it and delivered a learned dissertation on its virtues in 1818.

They were not mealy-mouthed, those old fathers in medicine. In one instance two members were cited before the society for "imposing on the public a nostrum known as 'Savage's Deobstruent Billious Pills,'" and when they refused to reveal the composition of said nostrum they were promptly expelled and a notice of the action was published in the local newspapers. There was no hesitation, no hanging back to see who should bell the cat. Again, it was voted that Jabez Dow and Robert Woodbury be a committee "to enquire into the conduct of Dr. Josiah Lane and see what is best to be done with him." I have searched diligently to find what did finally happen to poor Dr. Lane, but the records are darkly silent. I suspect that he was boiled alive. There were no dead laws on the books. At nearly every annual meeting the secretary was instructed to notify certain members that unless they paid their taxes and attended the meetings more regularly they would be dismissed from the society; and this was no idle threat. The penalty was often enforced against delinquents.

Those in charge of the records of to-day can study with profit the work of their predecessors of a hundred years ago. Theirs was an iron age, and very fittingly they used an iron ink. Those pages written a century ago are as legible to-day as ever, while some of the writing of twenty years' standing is fading so rapidly that it will soon be indecipherable. County secretaries should remember that the keeping of records is a sacred trust and should select for the duty an imperishable ink. The chirography of that early day deserves mention. All wrote hands that are remarkably legible, while some are positively ornate. Dr. Moses Colby, that able secretary and enthusiastic Freemason, has left behind some remarkable specimens. He lived in the so-called anti-masonic days. Evidently fearing that the order might be lost to the world from persecution, he has drawn on his records little shields filled with masonic symbols in order that future ages might find out the rite. In 1825, evidently inspired by the late presence in this country of the great French patriot, so dear to American hearts, he inscribed on his record for the year the legend, "U. S. A., Lafayette and Liberty."

Early in the history of the institution arrangements were made for receiving patients. In the records of the meeting for 1809 we find the following resolution:

Resolved, That when any patient shall be offered to the association for examination it shall be the duty of every member to examine him or her satisfactorily, when the patient shall retire, and each and every member, beginning with the youngest, shall give his opinion of the disease and of the practice to be pursued.

A glance at one or two of these cases will be instructive.

A Mrs. Berry was brought in for examination. I quote verbatim:

Dr. Lindsay's opinion was a general bodily debility and inaction of the whole system. Dr. Kittredge, calculi of the bladder and inflammation of the mucous membrane of the bladder, consequently a general debility. Dr. Morrison, dropsy of the ovaries. Dr. Hammons, general debility which is the cause

of the general symptoms, and occasional spasm of the neck of the bladder. Dow, Perkins and Drew gave no particular opinion.

From this we learn that "general debility," which so often appears in the death certificates of to-day, is sanctioned by ancient usage.

A patient with phthisis was brought in on one occasion and the following treatment recommended: "Counter-irritation, digitalis, emetics, phlebotomy, sudorifics and bloodroot." In another instance a poultice of white pine bark worked wonders in a lacerated wound. It probably occurs to each one of you that the boiling necessary for the maceration of that bark saved the patient from infection. In this connection it is amusing, in the light of modern surgery, to note the evident astonishment of a doctor who reported "an extraordinary case of adhesion by first intention of an incised wound of the foot." In later years, when homeopathy had begun to thrive, we find the history of a case of delirium tremens which had fallen into the hands of one of Hahnemann's disciples. This man was giving his patient "the enormous dose of four drops of laudanum night and morning," and death was imminent. The reporter came to the rescue with three doses of fifty drops each, and wound up with a teaspoonful and a half as a binder, after which the patient "had no more convulsions." He lived.

Do not think that I have cited these cases to hold the treatment up to ridicule. Heaven knows that any of us who has been in practice twenty years and over may well scratch his head and look dubious over some of the things which were considered good practice in the early days of his career. The lusty farmer came to the doctor's office in 1808 and bared a brawny arm already scarred with numerous jabs of the lancet, for a "spring bleeding." And Dr. Ichabod or Dr. Jedediah canted the big bowl of blood this way and that under his critical eye, discoursed learnedly on "buffing" and "cupping," and the patient departed weak in the knees but happy in the consciousness that a long winter's accumulation of filth and disease had been drained out of him. We know better now. The lancet, the fillet and the bowl have long ago disappeared. When such a man presents himself to-day we draw the prescription pad to us and write for a machine-made, coal-tar combination, of whose properties we are ignorant, whose virtue consists of a chemical formula nine inches long and a name that no man can pronounce—and the patient takes it and feels better. *Post hoc, ergo propter hoc.* Until we are rid of the beam we can not extract the mote; and in trying to sketch for you a picture of this society in its infancy I shall be, indeed, chagrined if I fail to impress you with the sterling integrity of its founders.

Many of them drove thirty and forty miles in January to attend these gatherings. At a meeting held in Gilmanton in 1809 there were fifteen physicians present, coming from the following towns: Barrington, Barnstead, Dover, Gilmanton, Middleton, Moultonboro, Sandwich, Tamworth and Wolfeboro. When we reflect that there were no railroads in those days; that the highways must have been imperfect and often hazardous, necessitating for the doctor long journeys on horseback in all kinds of weather—then do we begin to realize how much in earnest those men were who attended those meetings so long ago. Surely theirs were lives of continual hardship and self-sacrifice, a fact that comes out most touchingly in their obituaries. Dr. Jabez Dow, whose name appears continually in the records, died at 63; Dr. Hammons died at 49; Dr. Jacob Kittredge, Jr., succumbed at 37, and of him it has been said, "No man in Dover could have been taken away whose loss would have been more severely felt." Several died between the ages of 35 and 45, sometimes from contagion taken at the bedside, and very often because of prolonged physical and mental strain which rendered them incapable of resisting the invasion of disease. The surgeons of to-day can not appreciate the strain of operating without an anesthetic. We read of that sturdy pioneer in surgery, Dr. Nathan Smith, that on one occasion, with tears in his eyes, he begged his assistant to throw himself across the bed that he might be hidden from the eyes of the trembling boy whose leg he was about to amputate.

Brethren, we possess in those early records of the Strafford District Society a priceless inheritance. Across the gap of an hundred years they come to us, bearing shining examples of steadfastness, of courage and untiring devotion. A few short years and a new generation shall search these pages for the meager record of our lives. God grant that it may be said of us, as it may be truly said of them, that the world was better for their having lived. Let us always bear in mind that the thing that shall comfort us when we step down into the valley of the shadow will not be the size of the estate we shall leave behind, not the places of honor we have held among men; but, rather, the reflection that we have been able to relieve some poor sufferer of his mortal pain, that we have been useful men in our generation, and that we may look forward with confidence to the reward which awaits honest labor.

Clinical Notes

TWO CASES OF MASTOIDITIS WITH INTRACRANIAL COMPLICATIONS*

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CASE 1.—*Epidural and perisinus abscess; no history of otorrhea; extensive bone disease; death from suddenly developed meningitis.*

History.—The patient, O. B., aged 33, on the advice of his family physician, Dr. Sansbury, called at my office on May 9, 1908. He gave a history of an attack of grip the latter part of March, when he first began to suffer with his ear. There was no discharge, but severe pain in the right ear, attended by throbbing and ringing noises. The temperature had ranged about 102 F. and he had had two chills. His chief symptom had been the intense pain just back of the right ear, extending up over the head on the right side. The pain was described as maddening, and as occurring in paroxysms with intervals of freedom. Formerly there was considerable "soreness" in this region. There was no history of any suppuration either in connection with his present trouble or at any time in the past.

Examination.—The mastoid region was found to present neither redness nor swelling; only some moderate enlargement of the peri-auricular lymphatic glands. Tenderness was elicited on direct pressure over the mastoid, but this symptom was not marked. No pus could be seen in the auditory canal. The drum membrane appeared red, thick and infiltrated; and though perforated in its anterior part, did not give exit to any discoverable secretion. A diagnosis was made of mastoiditis, with possible intracranial involvement, and the patient advised to submit to operation without delay. This he declined to do and returned to his home in the country.

* Read before the Washington Society of Ophthalmology and Otology, Oct. 16, 1908.

Course of Disease.—About one week later (May 15) his trouble having grown worse instead of better, he returned for the purpose of undergoing an operation. In spite of his intense suffering the patient had continued to go about his work as a farmer, and had been, in fact, at work the morning of the day he called. He was sent to the hospital with instructions to prepare for immediate operation. The temperature on admission was found to be 104 F. In the afternoon vomiting of a projectile type developed. A rapidly deepening coma also set in, and the patient became difficult to arouse. The eyes and pupils reacted symmetrically to light; there was no stiffness of the neck.

Operation.—At 10 p. m., assisted by Drs. McKimmie and Miller, Dr. Burke administering the anesthetic, I made the usual mastoid incision curving about the auricle, which was however, supplemented by a horizontal incision extending backward, as soon as the extent of the bone lesion became apparent. The bone was soft and friable over a very wide area, and led backward into the occiput, far upward into the root of the zygoma and downward through the mastoid tip. A pulsating purulent focus was found posterior to the antrum, lying just over the sigmoid sinus. The very thick mastoid apophysis was completely removed, and the sinus uncovered over a distance of nearly two inches from the knee nearly to the bulb. Pus was found welling up from the latter region when the tissues of the neck were pressed on. The bone, which was soft and contained pus, was also removed in the middle fossa, freely exposing the brain in this region. The dura was found to be thickened and adherent. The lateral sinus, though slightly discolored, presented no evidence of containing a thrombus and we decided not to open it.

Postoperative History.—The stupor continued through the night, the patient's pulse being very weak, ranging from 85 to 95, and temperature about 103, respiration sighing. On the following day lumbar puncture showed a very turbid fluid of greenish-yellow color and foul-smelling. At 4 p. m. the temperature rose to 106, and the patient died at 6, never regaining consciousness.

The brain, thoroughly explored postmortem, disclosed no lesion other than a purulent meningitis; though careful search was made for an abscess, none could be found either in the cerebrum or the cerebellum. The lateral sinus was also opened and found to be free of any thrombus formation.

The points to which I direct attention in this case are:

1. The absence of any history of discharge, and the negative result as regards pus in the examination made of the ear. That there must have been pus formation in the middle ear at some period, however, is evidenced by the perforation which was present. The patient stated that in the beginning of his illness a "little hard substance like wax rolled out of his ear." Whether or not this be interpreted as a purulent mass, the case at least proves that we can not consider the history given by the patient, or even a negative finding on examination, as conclusive that we have before us an actual case of primary mastoiditis. It is always more probable that the discharge has been so slight as to have passed undiscovered.

2. The absence for a long while of any symptoms outside of the headache to point to the extensive amount of inflammation of the dura. From the state of the bone I judge that the underlying dural membrane and lateral sinus had been for a long while bathed in purulent exudate, yet no distinctive cerebral symptoms had arisen. It is interesting to note that pain manifested itself in sort of paroxysms, the patient enjoying intermissions of comparative euphoria when he would flatter himself that he was recovering. On the morning of the day he was operated on he was in the field working. It was only in the afternoon, after the patient had arrived at the hospital, that the very grave symptoms of meningitis arose, which from its rapid progress to a fatal termination may be classed with the fulminating type.

CASE 2.—*Meningitis complicating acute suppurative otitis with scanty discharge; slight disease of mastoid; lateral sinus opened; lumbar puncture; recovery.*

History.—The patient, J. Y. S., married, aged about 25, had an attack about the middle of January, 1908, attended with considerable inflammation of the nasal passages, generally grippy pains and a fever which rose to about 103 F. She complained of an earache, but this ceased promptly on the appearance of a discharge from the auditory canal. In a few days, however, the earache again set in and it was on account of this symptom that she consulted me for the first time, January 18. The drum membrane was found hyperemic and, although there was no bulging, I thought best to open it, especially as there was some tenderness on pressure over the mastoid. Under the use of the ice-bag, constantly applied over the postauricular region and frequent boric acid irrigations the pain in the ear ceased, the mastoid tenderness disappeared and in all respects the patient seemed to be recovering. It was not until February 13 that I again heard from this patient, having been called to see her then in consultation with her family physician, Dr. Louis Johnson, who said that the patient did well at first, but about a week after the paracentesis began to develop new symptoms. There was little or no discharge from the ear, but intense headache, vomiting, delirium, rapid pulse and a temperature ranging from 100 to 103.

Examination.—We found no discharge coming from the canal, the perforation having apparently closed. There was no bulging of the drum, and no prolapse of the posterior or superior canal wall. The deafness on the affected side was almost complete. There was some doubt as to the tenderness being elicited on pressure over the mastoid. The patient complained a great deal of pain and stiffness in the region of the neck upon the corresponding side. The temperature was of a decidedly septic type, going sometimes up to 103, at other times falling to normal; constipation, furred tongue and chills were present.

Operation.—The patient was sent at once to the Episcopal Eye, Ear and Throat Hospital, where, on February 15, I performed an operation, assisted by Drs. McKimmie and Biscoe. In addition to the ordinary mastoid, the bone was removed so as to expose the brain and the lateral sinus. The mastoid was found to be but little diseased. The antrum contained some granular debris, but no free pus. There was no carious bone in contact with underlying cerebral structures. The dura was congested and showed some dilated vessels coursing over it, but there was no sign of an epidural abscess. There being some doubt as to the state of the lateral sinus, I decided to open it in view of the absence of other brain lesions, taken in connection with the septic type of temperature. It was found free from clot, and bleeding freely from both directions.

Postoperative History.—The patient for three days seemed much better, as regards pain, vomiting and mental condition. The temperature, which had been ranging from 98 to 100, fell on February 21 to normal. On February 22 it rose to 103 and on the 23d to 104 and then began marked fluctuations, going to 104 and dropping suddenly to 99; pulse ranging from 100 to 136. Leucocyte count made February 23 was reported to be 23,000. The patient now began to complain of very intense headache, and to be restless and noisy especially at nights, vomiting constantly, almost no food being retained. Occasionally involuntary micturition took place, there was decided photophobia, and general cutaneous sensitiveness; inequality of the pupils and sluggish contraction. The patient would lie generally with her knees drawn up, and complained considerably of her neck. The Kernig sign was found to be present in a moderate degree. Lumbar puncture was made and fluid examined by Dr. W. W. Wilkinson, who reported liquid to be cloudy and containing pus, but no micro-organism. At night especially the patient would become wildly delirious, and even under repeated doses of morphin and other sedatives would sleep but a very little while at a time. Her loud screams could be heard through the hospital and kept all the patients upset. As the lumbar puncture seemed followed by

a general amelioration of the symptoms, it was repeated in about a week, removing again about two ounces of fluid, less turbid than before, still containing no micro-organisms.

Internally she took most of the time mercury and iodid of potassium. On March 1 we began collargol inunctions, used twice daily. On March 5 the clinical record showed that patient had a slight chill. In a few days, however, improvement set in and on March 8 temperature dropped to normal, and never afterward rose above 99. The mastoid wound did well from the first, and was completely healed in about two months. The hearing in the affected ear improved and the patient rapidly returned to normal.

This case, I think, is instructive in that it is an instance of a recovery from pronounced leptomeningitis, the clinical diagnosis being confirmed by the results of the lumbar puncture. It is one more to be added to the favorable cases previously reported by Macewen, Gradenigo, Brieger and others, which encourages us not to take an absolutely hopeless view on witnessing this dread disease develop as a complication of middle-ear suppuration. While from the given case I am not able to draw any satisfying conclusions as to the cause of ultimate recovery—whether it should be attributed to the operation on the diseased mastoid, removing the focus of infection, or to the lumbar puncture, relieving intracranial pressure and diminishing the amount of septic fluid, or to the possible beneficial influence of the collargol inunctions—I believe that in a similar case one need not hesitate to use all these measures, as each is indicated and possibly all three may contribute somewhat to the ultimate recovery of the patient.

Attention is called to the comparatively insignificant character of the aural symptoms. While not duplicating the former case in the absence of any history of suppuration, the discharge was slight and of short duration and had ceased completely at the period when the intracranial symptoms developed.

In the bone involvement a strong contrast is presented with the condition noted in Case 1, in which the bone destruction was far-reaching and profound, the dural membrane being in direct contact with diseased bone over a considerable area. In this, on the contrary, necrosis was very slight, the disease not reaching the inner table at any point.

815 Connecticut Avenue.

PHOSPHATIC CALCULUS OF THE POSTERIOR URETHRA

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Patient.—J. H., came to the clinic complaining of difficult urination, increased urination and decided urgency, with occasional attacks of complete retention. One such attack had occurred the day previous, for the relief of which he had been catheterized at another institution. He had had an attack of complete retention one year previously, and gave a history of several attacks of urethritis during his youth. He had been treated for stricture at one time. He had no hematuria and no pain.

Examination.—The patient was a well-preserved man about 55 years old. The urine was very cloudy and contained many long shreds. The catheter met with obstruction in the prostatic urethra. A small woven bougie passed into the bladder. A No. 10 (French scale) tunneled steel catheter guided over a whalebone filiform passed over a long soft calculus on the floor of the posterior urethra. The end of the calculus was seen through an endoscopic tube.

Operation.—Under cocain anesthesia I attempted to remove the stone through the endoscope, using a pair of long forceps with narrow blades, but succeeded only in breaking off small fragments of the stone, as the narrow caliber of the tube prevented the handle of the forceps opening to an extent sufficient to grasp the calculus firmly in the blades. As the pain became intense and hemorrhage profuse, further manipulations were not attempted at the time, since it appeared that an external urethrotomy would be necessary. Soon after arising from the table the patient felt inclination to urinate, and when he tried to do so the stream of urine forced the stone to within one inch of the external meatus, from which position it was easily removed with thumb forceps. After removal it was found to be a soft, friable, phosphatic calculus, 0.5 cm. in diameter and 3 cm. long, cylindrical, conforming to the shape of the posterior urethra. A size 26 steel sound was easily passed into the urethra on the following day. The patient enjoyed complete relief from all urinary symptoms afterward.

24 West Sixtieth St.

TRANSFUSION OF BLOOD IN A CASE OF PELLAGRA*

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Pellagra, a trophoneurotic disease now appearing in this portion of the country, possesses a high mortality rate in its acute type; 64 per cent. in the cases reported by Searcy.[1] Pellagra may probably be classed as one of the diseases caused by vegetable poisons, pellagrazein, a fatty oil or extractive so named by Lombroso. Pellagrazein is developed in fermenting and decomposing grain in the presence of a fungus. From the ingestion of this poison in corn meal the skin and nerve lesions characteristic of the disease result. As a rule there is associated with the disorder a pernicious dysentery probably of toxic origin. No cure has been found as yet.

For a more complete account of the disease the excellent articles by Bellamy,[2] Searcy,[1] Merrill[3] and that of Randolph[4] presented at this meeting may be consulted.

Considering the possibility that recovery from an attack of pellagra might produce a certain degree of immunity in the patient, the use of transfusion of blood from such a recovered patient in an acute case of pellagra suggested itself, as all medical means have failed in the treatment of this disease.

It is impossible to state the nature of the immunity until the etiology of the disease is definitely ascertained. If pellagrazein is the etiologic factor, the immunity may be of the nature of the antitoxin (antiricin) produced experimentally in lower animals against ricin.

To lend weight to any positive findings a recipient was found in such extreme condition that recovery was absolutely impossible in the opinion of one who has carefully followed all the cases of a large epidemic. To add further weight to the evidence, all medication was withdrawn after transfusion.

* Synopsis of paper read before the Southern Medical Association at Atlanta, Ga., Nov. 12, 1908.

1. Searcy, George H.: An Epidemic of Acute Pellagra, THE JOURNAL A. M. A., July 6, 1907, xlix, 37.

2. Bellamy, R. Harllee: Pellagra: Its Occurrence in This Country: Report of Cases, THE JOURNAL A. M. A., Aug. 1, 1908, li, 397.

3. Merrill, T. C.: A Sporadic Case Diagnosed as Pellagra, THE JOURNAL A. M. A., Sept. 14, 1907, xlix, 940.

4. Randolph, James H.: Pellagra and Pellagrins; with Report of Cases, Arch. Int. Med., January, 1908.

The patient's extreme condition might best be shown when we state that she was one of two selected to be transfused, the two being in apparently the same condition, and that before transfusion and within four hours of selection one of the two died.

Recipient was a colored woman, aged 35. Symptoms of pellagra developed only three weeks before transfusion, Aug. 3, 1908. There was a rapid downward progress of the patient with marked loss of weight and strength. At transfusion, the patient was unable to move her hands or head from extreme asthenia; in fact deglutition and phonation were barely possible. No distinct blood changes other than a secondary anemia were observed.

The donor was a healthy negro woman, aged 36, who had recovered from a severe attack of pellagra in the fall of 1907.

Transfusion was performed by Crile's method, the blood flowing over from the donor to the recipient in a good stream for twenty minutes, when the donor gave signs of syncope. The wounds were closed. Both patients left their tables in good condition.

August 4: Twenty-four hours after transfusion the patient showed marked improvement mentally and in general condition.

August 7: Steady improvement continued; desquamation of the lesions was marked.

August 11: One week after transfusion the patient had steadily improved and walked about the ward.

There was marked gain in weight. The patient went on to a perfect recovery and to-day is about and in the same state of health as presented before the onset of the disease.

No definite conclusions from the recovery in this one case can be drawn, but we believe the coincidence to be very suggestive, considering the condition of the patient, the known inefficiency of medical therapy and the high mortality rate in this disease.

202 Conti Street.

Therapeutics

PLEURISY

The frequency of dry pleurisy during the progress of pulmonary tuberculosis is well understood, and even without definite lung lesions the cause is generally recognized and the patient consequently properly treated. Acute pleurisy with effusion, however, is all too frequently considered non-tuberculous and consequently the proper after-treatment of the disease is not carried out.

Physicians connected with sanatoria for the cure of tuberculosis will all attest to the great frequency of a pleurisy with effusion as preceding, by a longer or shorter length of time, a tuberculous outbreak in the lungs. It should also be stated that no condition of the lungs is so frequently entirely overlooked, or if diagnosed, improperly treated, as pleurisy with effusion. Case after case of a permanently adhesed lung with perhaps permanent cardiac displacement and with contraction of the chest, and a lower lobe of a lung that can never again be aërated, is constantly found by the lung specialist. Even if the effusion is diagnosed many a patient is told that it will gradually be absorbed, and he may even be sent into the country to rest and await its absorption, all to the permanent damage of that side of the chest. Consequently, in any pleurisy with effusion, whatever its origin, tuberculous or other, even if there is not much dyspnea or displacement of the heart, the fluid should be withdrawn if it progressively increases or if it remains several days without decreasing. It seems to be good judgement not to remove all such fluid, as the plastic serum which is in close contact with the pleural tissue apparently has the power to combat bacteria and bacterial poisons. In other words, this substance seems to contain an antitoxin, or the ability to cause antitoxin to be produced, and if it is removed the tissues become more susceptible to infection.

For the sake of a positive diagnosis of the cause of pleurisy a portion of the liquid withdrawn may be centrifuged and if tubercle bacilli are present they may be discovered. Generally, however, they are not so found even if tuberculosis is the cause of the pleurisy. A specimen of such withdrawn, settled and centrifuged, fluid which has not been allowed to become contaminated with other germs, may be injected into a guinea-pig or rabbit, and if tubercle bacilli are present the animal will show the disease in a certain number of weeks.

Another suggestive indication that the origin of a pleurisy is due to tuberculosis is that this centrifuged specimen of the lower stratum of the settled pleural fluid may show relatively a very large number of lymphocytes, while if the pleurisy has been caused by other infection the polymorphonuclear leucocytes are found in greatly increased numbers. Also presumptive evidence of the tuberculous or non-tuberculous origin of the pleurisy may be given by a differential blood count. If the polymorphonuclear leucocytes are relatively increased in number, the presumption is that the condition is not tuberculous but due to some other infection. If, on the other hand, the lymphocytes are relatively increased in number and the polymorphonuclear leucocytes are not increased, the cause of the pleurisy is probably tuberculosis.

Of course diagnostic tuberculin injections and tuberculin vaccinations may be done to prove or disprove that the patient is harboring a tuberculous focus. However, it is certainly supposable, and probably true, that a patient might have a healed or quiescent tubercular lesion somewhere in him, or a tubercular gland, that to all intents and purposes was walled off from the rest of the body and inactive, and that this could be lighted up by a tuberculin injection and cause a reaction, and yet his present pleurisy be non-tubercular in origin.

Consequently, with or without a positive diagnosis of a tuberculous focus, or that the pleurisy was due to tuberculosis, the clinical evidence that a pleurisy, tuberculous or non-tuberculous, predisposes to tuberculosis of the lungs, should cause the axioms of the treatment of pleurisy with effusion to be as follows:

1. With pain or without pain in the chest, with dyspnea or without dyspnea, with cough or without cough, when suspicion is attracted to the lungs of a patient a careful physical examination should be made with the chest and back completely bared.

2. If pleural effusion is found it should not be allowed to remain in the chest more than a few days, even if there is not much dyspnea and not much displacement of the heart, unless the amount of the fluid is small and this amount is gradually diminishing.

3. It is perhaps wise not to remove all the fluid, but if the fluid rapidly reaccumulates it should certainly be again withdrawn.

4. A patient who has had pleurisy with effusion and has apparently recovered should be treated as though he were in the pretuberculous stage of pulmonary tuberculosis; in other words, he should have a longer or shorter period of rest and fresh air treatment, if possible. If such rest, during this stage of suspicion, is

not a monetary possibility, his lungs and his general condition should be carefully examined at least once a month, for a year, before deciding that he is probably safe from tuberculous sequences.

GASTRIC ULCER

Dr. Delancy Rochester, Buffalo, N. Y. (*New York State Journal of Medicine*, April, 1908), believes that patients who have gastric ulcer are always more or less neurotic, as evidenced by headaches, neuralgias, nervousness and hysteria. He finds present in almost every patient with this trouble a disturbance of the lower bowel, either as constipation or a chronic diarrhea, "frequently of the mucous colitis type."

A sharp pain in the region of the stomach, or a pain burning or gnawing in character, often more aggravated when the stomach is empty, at other times the undigested food causing irritation sufficient to produce immediate vomiting and the signs of hyperchlorhydria (which is proved by analysis of the test breakfast), are all symptoms so well understood as to require no detailed description. While the vomiting of blood or the finding of blood in the stools (other causes of the latter having been excluded) is diagnostic, it is not always necessary for hemorrhage to be present in order to make a diagnosis.

In the treatment of hemorrhage of the stomach, of the greatest importance are physical and mental rest and functional rest for the stomach. In order to quiet the patient, Rochester administers a hypodermatic injection of morphin and atropin "in full dose." He adds the atropin to the injection to overcome the effect which morphin sometimes has of increasing the flow of gastric juice. Functional rest of the stomach is best obtained by withholding all food for a time. Sometimes, although he is not convinced of its utility, he applies a cold coil to the epigastrium. If the symptoms show that hemorrhage is persisting he gives 1 c.c. (15 minims) of a 1 to 1000 adrenalin chlorid solution in 30 c.c. (1 ounce) of distilled water, and follows this in half an hour by from 50 to 100 c.c. (about 2 or 3 ounces) of a 10 per cent. solution of sterile gelatin. He also has obtained good results from the administration of subgallate of bismuth suspended in a gelatin solution, or when hyperchlorhydria is very pronounced, suspended in milk of magnesia. Of course recurrent hemorrhage calls for surgical interference.

He would withhold food, ordinarily, from forty-eight to seventy-two hours, but if there is excessive hyperchlohydria as shown by severe pain, he would have recourse to immediate feeding of small quantities of milk, diluted with vichy or mixed with milk of magnesia or lime water. Sometimes he gives ice water in teaspoonful doses or allows pieces of ice to melt in the mouth.

During the first twenty-four hours he would not give food even by the rectum, as nutrient enemata have been shown to increase the flow of the gastric juice. The first enemata used should be normal salt solution, and later peptonized milk and egg may be used. These nutrient enemata should be given every six or eight hours, though a small amount of salt solution, 100 to 200 c.c., may be given by the rectum during the interval.

To cure the condition which he thinks caused the ulcer, he would investigate all reflex possibilities, believing that ulcers of the stomach may be brought about by a condition of nerve disturbance, due to nervous reflexes from the eyes, ears, nose, and throat, and to those from the gall bladder, rectum, and other abdominal and pelvic organs. He emphasizes the fact that eyestrain should be cured, and colon fermentation and putrefaction should be prevented, and any hygienic measure that will build up the general health of the patient will prevent the recurrence and promote the healing of an ulcer of the stomach.

As to diet, he would study each patient carefully and decide which particular foods were the best for that particular patient, of course "excluding all coarse-fibered vegetables and cereals, all highly-seasoned foods, fancy dishes, all salted and preserved meats and fish, and usually all soups made from meat stock." He would exclude "beers, ales, wines, and liquors of all sorts, and strong tea and strong coffee. Preserved fruits and pickles," he would exclude, but "fresh fruits, either raw or cooked," he would experiment with and see which caused disagreeable symptoms and which not. He recommends the drinking of a pint of pure water, or slightly alkaline water, or moderately carbonated water, with each meal, "as it dilutes and partially neutralizes the highly acid gastric juice. Gruels, milk, soups and other foods cooked with milk are useful." Cocoa not too sweet is useful. "White flour bread eaten with unsalted butter" he deems best. Meat should be eaten once daily, in the form "of beef, mutton or chicken." An egg or two once a day, with little or no salt, is advisable, and fresh fish may be taken occasionally. He would give the finer cereals, as "rice, sago, and tapioca (and macaroni cooked with milk), and would use plenty of cream, no salt, and little sugar." Baked and then thoroughly mashed potato, or creamed and then mashed he advises. Milk is, of course, the most valuable article of diet, but it should be diluted with alkaline water. Three or four hours after each meal he would have the patient drink a half pint of such diluted milk or milk porridge, sipped slowly, and taken pleasantly warm; not cold, not hot. The patient should take three meals a day, never overloading the stomach at one time, and not taking too great a variety of food at any one meal. He should eat slowly and chew thoroughly, and "not wash down half-chewed food with drink."

He relieves gastric irritation, flatulence and pain with:

℞.	gm. or c.c.		
Strontii bromidi	6		3i½
Sodii bicarbonatis	40		3ix
Carbonis ligni	20	or	
Bismuthi subcarbonatis	20		āā, 3ivss
Lactis magnesiæ	200		fl.℥vi

M. et. Sig.: Two teaspoonfuls, in water, three times a day, after meals. [Shake well.]

If between meals there is burning or pain in the stomach due to hyperchlorhydria, Rochester gives a gastric sedative which he attributes to Stockton, viz.:

℞.	gm.		
Cerii oxalatis	10		3iiss
Bismuthi subcarbonatis	20	or	℥v
Magnesii oxidi	40		3x

M. et fac pulverem.

Sig.: A teaspoonful stirred in water, and repeat in an hour, if needed.

The milk of magnesia or the milk of bismuth will often act as well.

Ascites and Myocarditis.—P. H. Markley, in the *New York Medical Journal*, states that in uncomplicated myocarditis, be the heart ever so weak, there is no dropsy and rarely any edema. If, however, there is, in addition to the myocarditis a defect of the valves, dropsy is almost cert[illegible]

DIRECT BACTERIAL TREATMENT OF THE COLON THROUGH THE VERMIFORM APPENDIX

CHARLES A. L. REED, M.D.
CINCINNATI

Patient.—Mr. N. P. S., American, aged 42, was sent to me Jan. 12, 1909, by Dr. E. W. Mitchell of this city, complaining of extremely severe recurrent attacks of mucous colitis, alternating with obstinate constipation.

Previous History.—In early childhood he had a supposedly tuberculous right hip joint which recovered after operation, leaving him with a shortened leg. He had no other illness from that time until 1893, when a persistent tendency to constipation culminated in an attack of mucous colitis. This condition became recurrent at intervals from and after that time and became likewise the conspicuous feature of an invalidism that not only interfered with his comfort but with his efficiency as a business man and which drove him in quest of relief to numerous physicians across the continent from Seattle to Philadelphia and back again. He developed headaches and became irritable and despondent, his nervousness manifesting itself at times in nocturnal emissions. He developed some rectal trouble for which a proctologist divulsed his sphincter ani muscle, another cut out some "pockets" and burned the places with silver nitrate. Then a surgeon had to excise some ulcers where the pockets had been. Then he had a course with high injections of iodoform, bismuth and olive oil. Then a genitourinary man told him that the whole mischief was urethro-prostate in origin for the relief of which he dilated the urethra, inserted cold sounds and washed out the bladder with ice water. Then somebody put him through a course of colonic lavage. At intervals between these special consultants he would drop back into the hands of medical attendants for the most part, who purged him for "intestinal indigestion" and gave him divers and sundry things for neurasthenia or sent him west to get well or die of "tuberculosis of the bowels." This went on until he sought Dr. E. W. Mitchell, who sent him to me, we being, respectively, the eighteenth and nineteenth on the list.

Examination.—Revealed a man of excellent physique, good nutrition, but with high arterial tension. The colonic areas were dull on percussion from the cecum to the sigmoid. There was slight gastric resonance. The rectum was normal except that there were a number of areas of cicatricial tissue. The elasticity of the sphincter ani muscle was normal. The genitourinary examination was negative in all particulars.

Diagnosis and Treatment.—After holding the case under observation for a week or more I told the patient that, in view of his past history and of the great diversity of treatment to which he had been subjected, I felt that an appendicostomy with such subsequent treatment of the colon as might be found expedient, would constitute a justifiable line of procedure. I explained to him that appendicostomy, surgically speaking, was no experiment and that in proper hands and under proper surroundings it was a safe operation. I made it clear, however, that the subsequent treatment, so far as final results were concerned, was experimental, but that the whole proposed line of treatment was both logical and safe and that after the immediately surgical period had been passed it would not interfere with his attention to his large business interests. He himself analyzed the proposition in the light of a very superior intelligence and at once embraced the suggestion as affording a possibility of escape from his long martyrdom.

The patient entered the Good Samaritan Hospital Annex January 22, after having had a week of diet of which the uncooked-whole wheat bread with buttermilk reinforced with lactéol (Boucard) were the leading features. These agencies had made no impression on the case. The colon was accordingly unloaded by high lavage and the patient was prepared for operation.

Operation (Jan. 25, 1909).—The technic was precisely the same as that for appendicitis, with the exception that the appendix was brought up and, instead of being excised, as usual was stitched into the wound and its extruded tip removed. This part of the procedure was not easy in this case because, in addition to a somewhat elongated band that bound the cecum to the lateral parietal peritoneum I found a typical appendicitis obliterans. In other words the appendix, which was found buried beneath a blanket exudate that was so highly organized that it looked like normal peritoneum, was so atrophied that its lumen was obliterated in its entire length from the tip to within a little more than a quarter of an inch from its base. This stump was, however, used for fixation in the wound and through it a catheter was placed in the cecum and left in situ. The fixation of the bowel was, therefore, reinforced by a double row of sutures between the cecum and the parietal peritoneum. There was neither shock nor special discomfort following the operation and the patient's appetite scarcely faltered for a single meal.

Colonic Examination and Treatment.—January 28, the second day following the operation, steps were taken to determine the existing flora of the colon, by Dr. W. H. Strietmann of the bacteriologic department of the University of Cincinnati. Standardized bouillon and agar-agar were used and inoculations were made from the feces, both through the wound in the cecum and as they were discharged by the rectum. After the cultures were incubated plates were poured. In the meantime, after these first cultures had been started and awaiting their determination, the colon was thoroughly cleansed by injecting a dram of fluid extract of cascara with two ounces of sterilized glycerin through the tube into the cecum.

The effect was a thorough and painless evacuation of the colon and was realized within an hour after the injection into the cecum. This treatment was repeated on each of the two succeeding days, the object being not only to unload the colon, but to secure the exosmotic influence of the glycerin in reducing the presumably hypertrophied mucous follicles, and, likewise, to sweep out any adventitious and pathogenic bacteria that might be infesting the bowel.

By this time, however, the stab cultures started on January 28 and 29, were reported by Dr. Strietmann as showing no anaërobes, while the plates revealed only a pure culture of a bacillus with rounded ends, non-motile, which produced acid and gas and coagulated milk and was probably *Bacillus lactis aërogenes.*

Ten days later it was found that one of the plates revealed a single colony of *B. coli communis.* Later cultures modified this finding but slightly. Those from February 3 to 6 showed greenish coloration in the bouillon, while the hanging-drop revealed a motile bacillus and a non-motile one of different size. Agar plates showed the same green color and this same bacterium in gram positive. It was probably *B. pyocyaneus,* which may have reached the colon through the appendicostomy wound.

These revelations, indicating the practically complete absence of the usual flora of the colon, suggested a change of treatment. Milk cultures of the *B. lactis aërogenes, B. bulgaricus* and the *Streptococcus lacticus,* derived from lactic bacillary tablets (Fairchild) and from lactéol (Boucard) were accordingly thrown through the tube directly into the colon. This on two occasions was fortified with the *Saccharomyces cerevisiæ.* The results of this line of treatment, so far as re-establishing a resident flora of the colon is concerned, are being studied by Dr. Strietmann, by whom they will be embodied in a final report of the case.

Results.—The patient left the hospital February 13, experiencing not the least inconvenience from the tube, which he will probably wear for several months and which will not in the least interfere with his attention to business. The clinical results so far realized are disappearance of the mucous colitis, normal action of the bowels and disappearance of the previously almost constant headaches.

The case is reported in this preliminary way at this time with the hope that it may prompt similar experience at the hands of other operators followed by prompt reports of primary results and these, in turn, by full reports of end results.

A CASE OF MULTIPLE CYSTS OF THE MESENTERY

FRANK VAN DER BOGERT, M.D.
SCHENECTADY, N. Y.

In view of the present interest in cysts of the mesentery and in their origin, the following case is reported as it appears to be rather remarkable pathologically and belongs to a class few instances of which have been recorded:

Patient.—M. L., female, aged 5 years and 6 months, was born at full term, of apparently healthy parents, the labor being normal.

History.—There is said to have been great difficulty in obtaining the first movement from the bowels. The baby was fed at the breast for about nine months, and apparently suffered a great deal from colic, the attacks of which were said to have been quickly relieved by medicine given by the attending physician. She has always had more or less digestive trouble, accompanied by mild constipation for which castoria, cascara and aperient waters were given with relief. She was not given many enemata. The constipation was occasionally treated by equal parts of castor oil and sweet oil by the mouth. There is a history of irregular and improper feeding since infancy. She has always been a great eater of sweets and practically has been allowed to eat what she wished and when she wished it. The gastrointestinal symptoms were attributed to these causes. The child became nervous and irritable. About three years ago the abdomen was first noted to be distended, and has remained so since, the distention slowly increasing in amount. In April, 1906, when I first saw the child, I examined the urine. I have no record of the history on this date, but the examination was apparently made to determine the cause of enuresis which was not relieved. Recently, apparently, it was relieved by suggestive treatment applied during the summer by the father, who is a clergyman, having much faith in this mode of treatment. In the light of the later history, however, the effect of suggestion seems rather dubious. The treatment, however, though seeming to relieve the symptom, did not absolutely cure it, a relapse occurring later. In 1906 I saw her during an attack of urticaria, which was attributed to the general digestive disorder. The attack was chronic in nature and lasted for months. In May, 1907, I first noticed a slight umbilical hernia, and at this time the abdomen was markedly distended. The hernia had existed for some time prior to its being brought to my attention.

Examination.—In November, 1908, some time having elapsed since my last treatment, a large fluctuating tumor was noted in the lower right quadrant of the abdomen, but extending somewhat past the median line to the left. It did not reach above the umbilicus and extended to the pelvis. It was about the size of a fetal head or large grape fruit, and there was decided fluctuation, a most distinct wave being noted, the fluid apparently being contained in a very lax sack rather than under pressure. The abdomen at this time was very prominent and pendulous. A rectal examination was not made on account of the pain accompanying such a procedure, but the patient was catheterized prior to operation to eliminate the possibility of a distended bladder, I say possibility because the tumor was not in the median line. An absolute diagnosis was not made—the condition being noted simply as a cyst—ovarian or mesenteric in origin.

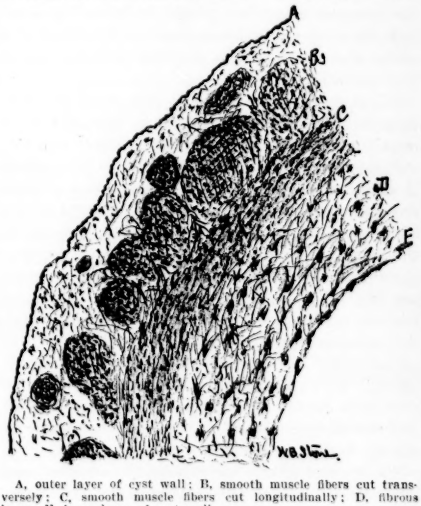
Operation.—On Nov. 28, 1908, the patient was operated on by Dr. William P. Faust. The abdomen was opened by the usual median incision. A large cyst about the size of a fetal head or about 18 cm. in longest diameter andcontaining a thin, blood-stained fluid was found a little to the right of the median line. Two cysts somewhat smaller than the first were delivered and evacuated, and found to contain about 1.5 liters of fluid. Several small cysts, about ten in all, were then emptied. All the cysts were found to have their origin in the mesentery of the ileum. There was no well-defined pedicle, the attachment being in the mesentery and extending along the intestine for a space of about 12 centimeters. The cysts were ligated with a lock stitch. Resection of the bowel was considered, but found unnecessary. The abdomen was closed without drainage and the patient made an uninterrupted recovery.

Unfortunately, through some misunderstanding, the fluid evacuated was not saved, so that there is no record of the chemical or microscopic examination of this fluid.

The pathology of the wall of the largest cyst was carefully studied by Dr. Warren B. Stone, pathologist to the Ellis Hospital, Schenectady, and his report follows:

The outer surface was smooth, glistening and purplish red in color. In three spots were punctate hemorrhages. The cyst wall varied in thickness from 2 to 4 millimeters. The inner surface of the cyst was smooth, and of a dull, white color. Several bands of rather dense fibrous tissue ran in different directions of the cyst wall, giving somewhat the appearance of a coarse network running through its structure.

Under the microscope the outer surface was seen to be covered with normal peritoneum. The subserous or connective tissue contained many congested blood vessels, and showed some round cell infiltration and a few small hemorrhages. The accompanying illustration shows the microscopic appearance.



A, outer layer of cyst wall; B, smooth muscle fibers cut transversely; C, smooth muscle fibers cut longitudinally; D, fibrous layer; E, inner layer of cyst wall.

Beneath the connective tissue were found many smooth muscle fibers arranged in bundles and forming two distinct layers running at right angles to each other. The arrangement being characteristic of the structure of the intestines. No epithelial lining was detected.

Judging from the characteristic appearances, the cyst is one of that rather rare variety, the origin of which has been attributed to the sequestration of the intestine during fetal life.

Dr. C. W. Dowd,[1] New York, has written a complete and comprehensive paper on mesenteric cysts and their origin, in which he describes cysts of this character and suggests their origin from the intestine.

The smaller cysts, had they been examined, might have shown characteristic epithelial lining. This examination, unfortunately, was not made.

111 Union Street.

1. Ann. Surg., xxxii, No. 4.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

103 DEARBORN AVENUE . . . CHICAGO, ILL.

Cable Address . . . . "Medic, Chicago"

Subscription price . . . . . Five dollars per annum in advance

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SATURDAY, FEBRUARY 20, 1909

THE PRESENT STATUS OF THE WASSERMANN REACTION AS A DIAGNOSTIC AID IN SYPHILIS

The complement fixation test, the so-called Wassermann reaction, as applied to the diagnosis of syphilis has given rise to an immense amount of work. This has been partly critical. The great bulk of it, however, has been so strongly confirmatory as to leave no doubt as to the great practical importance of the method as a means of clinical diagnosis, provided its limitations are kept carefully in mind.

The method as first devised depends on the principle, formulated by Bordet and Gengou in 1901, of complement fixation by union of a given bacterial substance with the specific "antibodies" found in the blood serum of an infected animal. If, for example, to a properly prepared extract of typhoid bacilli (an antigen) a little blood serum of a rabbit immunized to typhoid be added, and then a little serum of any normal animal for complement, the mixture will combine with the complement and "fix" it. But if there be substituted for the immunized rabbit serum that of an animal not so treated, the complement will remain free, as it will if the extract of any bacillus except typhoid be used. Hence, having a known extract, or a known serum, it may be possible to identify the immune bodies (antibodies) or bacterial substances in an unknown mixture by demonstrating fixation of complement.

The presence of free complement in such a mixture is determined in the following manner: The blood serum of a rabbit which has been injected with the blood of a sheep acquires the power of dissolving the red corpuscles of the sheep. But it can do this only when free complement is present. If the hemolytic serum be heated so that its complement is destroyed, it will not dissolve the corpuscles until free complement is added from some other source. Hence, by adding to such a mixture of fresh corpuscles and heated immune rabbit serum a solution containing complement, it can be determined whether in this solution the complement is free or fixed by observing the occurrence or non-occurrence of hemolysis.

In applying the test to the diagnosis of syphilis, a bacterial extract can not be obtained directly, so an extract of the liver of a syphilitic fetus is used instead, and the blood serum of the patient in which the presence of syphilitic antibodies is suspected is mixed with it. Since the first observations were made it has been found that such serums containing antibodies for syphilis will bind complement when mixed with extracts of normal tissues in larger quantities, or even with solutions of lecithin or bile salts. Hence the biologic specificity of the reaction has been disputed. This does not, however, impair the clinical value of the test, as only sera from syphilitic patients yield the reaction.

Unfortunately, the technic of the reaction is complicated. Every step in the test has to be very carefully controlled, and at present it is impracticable, except in well-equipped laboratories and in the hands of experienced workers.

Statistics of a large number of cases in which the reaction has been clinically applied are now available. In testing for antibodies it is very rare that positive reactions are obtained when syphilis can be excluded with reasonable certainty. In cases clinically syphilitic the percentage of positive reactions is in the primary stage from 40 to 60 per cent., in the secondary stage from 70 to 90 per cent., in the tertiary stage from 50 to 90 per cent. The reaction often ceases to be positive under mercurial treatment. A positive reaction tells us that syphilitic infection has been present, but it appears to be no indication of the necessity for treatment nor of the activity of the disease. A positive reaction is yielded by the serum and the spinal fluid of subjects with tabes and general paresis in from 60 to 80 per cent. of the cases.

Attempts to demonstrate the presence of the syphilitic poison itself, the antigen, have been made but have not been followed by constant results.

Positive complement fixation reactions have been reported in a few non-syphilitic conditions, notably in infections with certain protozoa (yaws and trypanosome infections). Several observers have reported positive reactions in cases of scarlet fever. A few cases are on record in which it occurred in cases of great emaciation, as in carcinoma, pyemia and tuberculosis.

In cases uncertain clinically a positive reaction obtained under proper controls is very strong evidence of the pre-existence of syphilis. After syphilitic infection a positive reaction can be obtained, as the above statistics show, in from one-half to three-fourths of the cases. A negative reaction, it should be kept in mind, does not exclude syphilis.

INTERNAL CANCER AND CHRONIC TRAUMA

Although we have no inconsiderable number of articles in the literature bearing on the relation of trauma to tumor formation, a common defect is that the amount of material on which conclusions are based is not sufficiently large to give valuable results. With the enormous material of Vienna at his disposal, however,

Haberfeld[1] has been able to examine a sufficient number of cases of cancer to entitle his figures to respectful consideration. His investigations concern only the cases of carcinoma of the stomach, the gall tracts and the lungs, and, in his opinion, the results are emphatically in support of the view that, at least in these three organs, chronic trauma is a most important predisposing cause of cancer.

Since Rokitansky first directed attention to the relation of gastric ulcer to gastric cancer, both clinicians and pathologists have given this subject much consideration, and, while clinical experience has spoken decidedly in the affirmative, conclusive proof seems to be lacking from the anatomic side. This seems now to be satisfactorily supplied, for of the 662 cases of cancer of the stomach occurring in Haberfeld's series of 20,000 autopsies no less than 106, or 16 per cent., showed macroscopic evidence of having originated in round ulcer of the stomach, which, in view of the impossibility of telling anything about the place of origin of many advanced ulcerating carcinomas, is undoubtedly much below the actual proportion. Additional evidence of this relationship is furnished by the tables of distribution of carcinoma and ulcer in different parts of the stomach, for the correspondence of frequency is very striking. The current opinion that carcinoma of the stomach is much more common in men while ulcer prevails in women is confuted by this large series of autopsies, in which there seems to be really but little difference between the two sexes in respect to either of these lesions.

Even more distinct is the relationship between the concurrence of gallstones and carcinoma of the gall tracts. In the 20,000 autopsies under consideration there were no less than 164 cases in which biliary tract carcinoma was the cause of death, and in 119 of these (73 per cent.) gallstones were present. High as this proportion seems, it is even less than that reported by some other statisticians. Here also collateral evidence is at hand, consisting in the fact that there is exactly the same predominance of cancer of the gall tracts in women, 73 per cent. of all cases, as there is of gallstones, in the same series of autopsies, which yielded 265 cases of cholelithiasis, of which 195, or 73 per cent., were in women. A question that has been always raised whenever the relationship of gallstones to cancer is under discussion is whether the gallstones are not secondary to the cancer rather than the predisposing cause of the malignant growths. This would seem to be settled in the negative by Seigert's observation that, whereas in a series of 99 cases of primary carcinoma of the gall bladder, stones were present in no less than 95, yet in 13 cases in which the gall-bladder cancer was secondary to a growth in some other organ stones were found only twice.

1. Zur Statistik und Ätiologie des Carcinoms des Magens, der Gallenwege und Bronchien. Ztschr. f. Krebsforsch., 1908, vii, 190.

In the cases of carcinoma of the lungs, chronic irritation was found to play a similar, if less striking rôle, the evidence being more difficult to collect and interpret. Haberfeld found 68 cases of primary lung cancer in a series of 40,000 autopsies, which will probably seem a remarkably large number in view of current ideas concerning the rarity of primary tumors of the lungs. The pathologists, however, appreciate that these figures are not exceptional, knowing that lung tumors are most commonly found at autopsy without their having been recognized during life. As evidence that lung tumors also may be incited by chronic trauma, we have the following facts: The starting point of these tumors is predominatingly in the right lung, and chiefly in the main bronchus, which may be correlated with the fact that the right bronchus is most subject to injury by dust and other foreign materials by reason of its more direct continuation from the trachea and its larger size. Cancer of the lung is far more common in men than in women, probably at least three to one, which harmonizes with the fact that men are more exposed to bronchial irritation by reason of their occupations and habits. Histologically, it is found that pulmonary cancer is frequently a squamous-cell carcinoma, which is explained by the fact that under the influence of chronic irritation the cylindrical epithelium of the bronchi becomes transformed into the protective, squamous-cell type of epithelium, from which, in turn, squamous-cell carcinoma may arise if the irritation continues.

While none of the above facts taken singly would constitute a sufficient proof of the dependence of lung cancer on chronic trauma, yet taken together they certainly establish a strong case.

SOME NEEDS IN THE FIGHT AGAINST TUBERCULOSIS

Even the most optimistic among us, and those who are most encouraged by the results so far obtained in the prevention of tuberculosis, realize that as yet we have invaded only the confines of the territory to be conquered. When one reads of antituberculosis societies, sanatoria, dispensaries, and classes, an impression of the magnitude of our armament in the struggle against tuberculosis is gained which is misleading to those who are not in actual contact with the work. It is certainly not realized as yet by the public, and probably not understood by many physicians, that in the average large city of to-day the patient with advanced tuberculosis is almost an outcast. The sanatoria, naturally enough, desire to receive only patients who have the disease in a stage early enough to permit of probable recovery. The general hospitals, on the other hand, properly object to placing patients with advanced tuberculosis in the wards, as, no matter what precautions may be taken, the ignorant and filthy among consumptives are a constant menace to their neighbors, and should not under any circumstances be confined in a

ward with patients suffering with or convalescing from non-tuberculous diseases of the respiratory tract. A few general hospitals have special wards for tuberculous patients, but even then the number of beds available for these patients is often as the proverbial drop in the bucket. It is apparent to all city dwellers who are cognizant of the situation that one of the greatest needs of most cities, so far as the tuberculosis problem is concerned, is hospitals, or special wards, for the reception and care of advanced cases of pulmonary and other grossly infective forms of tuberculosis, and this is especially the case because in the advanced stages enormous numbers of bacilli are often excreted.

There is another aspect of the problem which as yet has not received sufficient attention. The specialists in tuberculosis, mostly sanitarium physicians, cry out for early cases, claiming that the recognition of the disease in its incipiency is rare, and usually casting the blame on the general practitioner, whose feeble diagnostic acumen they deplore. We can not pretend that all practitioners of medicine are experts in the early diagnosis of phthisis. Still, in all fairness, it is necessary to state that the fault is often not theirs at all, but lies with the patient. Too often the tuberculous among the working classes ignore their symptoms until the disease is so far advanced that even the tyro can diagnose it, and the failure to make early diagnoses is as often, perhaps more often, due to this factor than to careless examinations and poor diagnosis on the part of the practitioner.

To put the matter in another form: it is now evident that if we are to stamp out tuberculosis we can not rely on patients seeking us, but must institute an active campaign having for its object the detection of those tuberculous individuals who from ignorance or indolence have failed to seek the advice of a physician. This has been done to some extent by those doing the house-to-house work of antituberculosis dispensaries. The families of the patients with tuberculosis who visit the clinics are inspected now in several cities, and these examinations have shown in many instances widespread family infections where only one member, perhaps, had symptoms that compelled a visit to the physician. This work, while of the greatest possible importance, still leaves untouched those who have not applied for treatment and who are often equally dangerous to their families and associates. Fulton's[1] work in Providence indicates another point of attack, and shows that the owners and operators of mills and factories may be led to realize the industrial importance of tuberculosis, and may be willing to combine and give active support to those fighting the disease. The extension of the antituberculosis crusade to factories may be regarded as an important step, since it brings the subject prominently before both employers and employed. The work should certainly be extended, and should become as much a part of factory administration as the medical inspection of schools in many cities has become a part of school administration.

1. The Detection and Treatment of Cases of Tuberculosis Among Factory Employés. Read at the Third Annual Meeting of the National Association for the Study and Prevention of Tuberculosis.

THE EMMANUEL MOVEMENT AS SEEN BY A CLERGYMAN

The most recent invasion of the field of medical practice is found in the widespread adoption of the Emmanuel movement by ministers and religious teachers of various denominations. An unusually timely and rational estimate of this movement from the standpoint of the clergyman is an article by Rev. George A. Gordon in the *Congregationalist* for February 13, under the title "The Practice of Medicine by the Unfit." Dr. Gordon defines the practice of medicine as "the treatment of human beings, in a pathologic condition, as the subjects of physical disorders and diseases."

After relating his experience with Eddyism and emphasizing the utter ignorance of the followers of this cult of even the elementary facts of anatomy and physiology, Dr. Gordon says: "The most recent phenomenon is the emergence of the preacher of religion as a medical practitioner, his wizard wand being psychic force. Here again the interest is great and generally the motive of the healer is pure. Disease abounds; the mystery of pain is widespread; suffering is one of the horrors of existence. The forces at work for cure, relief, mitigation, noble and efficient as they are, manifestly are unequal to the need. Can we not invent some new therapeutic agent that will work wonders, that will change like the rising sun, night into day? Just at this point the delusion of the religious healer becomes plausible." The fact that the principles taught as new discoveries are in reality as old as human relations is then clearly brought out. "That psychic force is a healing agent no man will deny. . . . The personality of a vigorous, wise, humorous, sympathetic and noble human being, in any vocation, is a distinct influence for health in the community in which he lives. . . . But is not all this as old as the relation of parent and child, teacher and pupil, prophet and people? . . . Have not all wise preachers in all generations always done the attainable service which these psychotherapeutists have turned into a cult? . . . The psychic treatment of disease is apt to become a craze. An auxiliary force strictly limited in availability and always requiring for its use a level head is turned into a panacea in cases that call for a scientific physician. In pathology we enter the domain of a disordered or diseased physical organism. No man has the least moral right in this domain but one scientifically competent. . . . I do not know a single member of my profession who could pass a first year's examination in any reputable medical school in the country." After carefully considering and enumerating the large amount of work and training that enters

into the preparation of the modern, educated physician, Dr. Gordon says regarding the monstrous confidence with which persons, largely without knowledge and with no special training, rush in as healers that "they are monumental examples of the 'blind persistent courage of the book agent.'"

Looking at the movement from the point of view of the clergyman, Dr. Gordon finds the situation unfortunate in that the minister, when he becomes a healer, abandons the calling for which he has been specially trained to take up a work for which he has no training and no ascertained ability and which he can not by any possibility do well. The resulting confusion he considers unfortunate from the viewpoint of the patient, since it leads him to underestimate the value of the services of a true expert; turns him away from the only true source of relief, namely, scientifically qualified men; and raises in him false expectations and superstitious feeling. The church, he concludes, also suffers. "A hospital is one of the most benign of all the institutions created by man, but a hospital is not a church. . . . The mission of the church is not primarily to the sick but to the well. . . . Its chief mission is to the strong that they may secure justice and mercy." Reviewing the value of churches as moral and philanthropic agents in a community, he says: "Turn now any strong church into a sanitarium for those who are really ill and for those who only think they are ill and you bereave the ideal causes of a community in a cruel manner." "Hence," he concludes, "let the church and the hospital continue as separate institutions; let the people in the church continue under the care of the preacher and those in the hospital under the care of the physician, and let the master spirit in each call on the service of the other in time of need."

Dr. Gordon's discussion of this movement is remarkably sane. His closing paragraph can be commended to the careful consideration of all enthusiasts and faddists who aspire to assume, without preparation, the work which is being done painstakingly and with constantly increasing efficiency by men who have devoted their lives to preparation for it. "The ideal of knowledge is infinite; the attainment, the perfection of specialists has a clear and pathetic limit. It remains for the individual man to do the small bit of work for which he is fitted; to let religiously alone the work for which he is manifestly unfit, and to bear in mind that about the best thing that good men can do for the noblest causes is to go through the world with a level head."

DIRECT BACTERIAL TREATMENT OF THE COLON THROUGH THE VERMIFORM APPENDIX

The preliminary report of a case under this caption in this issue[1] is of interest, not only on account of the fact that the bacteriology of the alimentary tract is now much to the fore, but because of the results realized in this case and the possibilities, both in a scientific and therapeutic way, that are suggested by the procedure. The normal flora of the colon has never yet been studied with a definiteness that is more than suggestive. The relation of flora to function of the colon is not yet determined. The influence, inhibitory or otherwise, of the alimentary secretions on various micro-organisms remains to be determined in their natural position. The possibility of replacing one flora with another and the results of such a change on the health of the patient are entirely undetermined questions. Some new light may be thrown on the mode of operation of cathartics and of intestinal antiseptics so far as they influence the micro-organisms, benign or pathogenic, as they are found in the alimentary canal. In the determination of these questions there is an obvious advantage in having access, for a prolonged period, to the head of the colon, particularly when such access can be had without interfering with the patient's usual daily activities.

1. THE JOURNAL A. M. A., Feb. 20, 1909, p. 636.

PRESERVATIVES AND PURE FOODS

The question as to whether the use of benzoate of soda in particular, and chemical preservatives in general, is necessary in putting up food products has been answered in a most practical and unequivocal manner by the recent convention at New York City of the American Association for the promotion of Purity in Food Products. The object of this organization of manufacturers is to educate the public to the fact that chemical preservatives are absolutely unnecessary in the preparation of food products. In a resolution adopted by this association and sent to President Roosevelt, the following statements occur:

> As practical manufacturers, we know that artificial preservatives of any kind are unnecessary to the successful commercial preparation of good, sound, raw materials, under proper sanitary conditions. . . .
>
> The use of artificial preservatives makes possible and invites the employment of inferior and waste materials often unfit for human consumption and careless methods and insanitary conditions in food preparations.

Such statements as these, coming from men of practical experience, are deserving of most careful consideration. It means that these men, actuated by enlightened self-interest, see that the "penny-wise pound-foolish" attitude of the reactionary food manufacturers in the long run will prove disastrous. If the adulterating manufacturers have their way, though it may result in larger dividends for a time — at the expense of public health—in the long run it "will not only cause in itself irreparable injury to the reputation and standing of the legitimate food-producing interests of the country, but will cause a great industry to revert to the deplorable state existing prior to the enactment of a national food law, to its great disparagement both at home and abroad." As these progressive manufacturers are carrying on a forceful and educative advertising campaign, doubtless it will not be long before the public is fully awake to what the legend, "contains one-tenth of 1 per cent. of benzoate of soda," means. If, therefore, it is possible so to prevent the emasculation of the national Food and Drugs Act that the legend must continue to

appear on the labels of preparations containing this chemical, the question may solve itself. On the other hand, if the "interests" at work against the pure food law and against Dr. Wiley are able to force the removal of the legend, the cause of decency and honesty in the manufacture of food products will suffer well-nigh irreparable injury.

Medical News

ILLINOIS

Personal.—Dr. Robert Dayton Luster, formerly of Granite City, has returned from abroad.——Dr. Philip H. Hesse, interne at the Illinois Northern Hospital for the Insane, Elgin, has resigned.——Dr. Albyn L. Adams, Jacksonville, vice-president of the trustees of the Passavant Hospital, has resigned.

Officers Elected.—At the annual meeting of Brainerd District Medical Society, held at Petersburg, January 28, Dr. John M. Wilcox, Clinton, was elected president; Dr. Don W. Deal, Springfield, vice-president, and Dr. Harry S. Oyler, Lincoln, secretary. The next meeting of the society will be held in April at Lincoln.——The Danville Physicians' Club, recently organized, has elected the following officers: President, Dr. Charles E. Wilkinson; vice-president, Dr. A. Merrill Miller, and secretary-treasurer, Dr. Benjamin Gleeson.

Chicago

Personal.—Dr. and Mrs. Alexander H. Ferguson are visiting their old home in Winnipeg, where Dr. Ferguson is to address the alumni of the Medical Department of the University of Manitoba.——Dr. and Mrs. Milton K. Eisenstadt have returned from Europe.

Health of Chicago Better.—There were 107 fewer deaths during the week just closed than in the corresponding week of last year. There were 52 fewer deaths from pneumonia, 23 fewer from influenza, 18 fewer from bronchitis, 6 fewer from tuberculosis, and 9 fewer from the acute contagious diseases. There was a marked decrease in the cases of diphtheria, scarlet fever and measles, but an increase was noted in the cases of typhoid fever. To the total of 827 cases of communicable diseases reported during the week, diphtheria contributed 145, scarlet fever 142, tuberculosis 109, measles 107, chickenpox and typhoid fever, each, 90, pneumonia 66, whooping cough 30, and diseases of minor importance 48.

INDIANA

Personal.—Dr. Perry Woolery and family have gone to Asheville, N. C., for the remainder of the winter.——Dr. James E. Donnelly has resigned from the staff of Union Hospital, Terre Haute.

Work of Physicians' Club.—The Physicians' Club of Elwood, which was organized eighteen months ago for mutual protection, reports that it has collected $1,100 in accounts previously supposed to be worthless. The postgraduate work outlined in THE JOURNAL is being discussed regularly. The club has been awarded the contract for the charity practice of the city, and with the $150 per annum received from this source proposes to start a medical library.

MARYLAND

Society Meeting.—At the annual meeting of the Anne-Arundel County Medical Society, held in Annapolis, February 9, the following officers were elected: President, Dr. Thomas H. Brayshaw, Glen Burnie; vice-president, Dr. J. Oliver Purvis, Annapolis; secretary, Dr. Louis B. Henkel, Annapolis; treasurer, Dr. Frank H. Thompson, Annapolis; delegate to the Medical and Chirurgical Faculty of Maryland, Dr. Charles R. Winterson, Hanover; alternate, Dr. Samuel H. Anderson, Woodwardville, and censors, Dr. Thomas H. Brayshaw, Glen Burnie, James S. Billingslea, Armiger, and Oscar H. McNemar.

Profession Opposes Nolle Pros.—Dr. James B. Merritt, Easton, indicted by the grand jury for an alleged criminal operation, and said to be under $5,000 bail, has applied to the governor for a write of *nolle prosequie*. The indictment also alleged that false death certificate, "typhoid fever and perforation of the bowels," had been made in the case. When this matter came to light, Dr. Merritt is said to have disappeared and to have been in hiding for several weeks. Nearly 1,000 names have been signed to his petition. The medical profession has now taken up the matter and declares it involves the honor of the profession and the inviolability of the laws.

Baltimore

Refused License to Practice.—Dr. Henry H. Hazen, who is said to have been refused a license to practice in the District of Columbia, is reported to have applied for a mandamus against the medical board there. It is stated that Dr. Hazen's period of practice in Baltimore did not amount to the two years required to obtain reciprocity benefits.

Vienna Professor in Baltimore.—Dr. Clemens von Pirquet, formerly assistant in pediatrics in the clinic of Prof. von Escherich and *privat-docent* in the University of Vienna, has arrived in Baltimore to take charge of the Harriet Lane Johnson Home for Invalid Children connected with Johns Hopkins Hospital, and to be professor of pediatrics in the university.

Hospital Report.—The annual report of the Johns Hopkins Hospital trustees shows that during the year 4,609 patients were admitted, making the total number of inmates 4,912. There were 219 births, 3,607 patients were discharged improved or well, 148 were discharged unimproved, 395 were not treated, and 196 were transferred to other departments. Two nurses visited 2,480 tuberculosis patients at their homes, and other nurses visited the homes of 1,298 children.

MICHIGAN

Personal.—Dr. Edwin L. Thirlby, Traverse City, has returned from Europe.——The house of Dr. Hugh M. Gale, Bay City, was burned January 19, with a loss of $2,000, partially covered by insurance.——Dr. James Ardiel, Grand Rapids, is said to have been committed to the State Hospital for the Insane, January 11.

Communicable Diseases.—During December, pneumonia, typhoid fever, diphtheria, meningitis, scarlet fever, measles and smallpox were less prevalent than for the average of the month in recent years. More cases of, and more deaths from, tuberculosis than the average were reported, and whooping cough was more prevalent than the average for the month.

The Conflict Against Tuberculosis.—Secretary Shumway of the State Board of Health is endeavoring to secure the passage by the legislature of a law prohibiting expectoration in railway stations, public places and public conveyances.——The new shack of the tuberculosis colony at Kalamazoo, was dedicated January 21.——The Upper Peninsula Society for the Cure of and Prevention of Spread of Tuberculosis and Other Contagious Diseases, at its meeting in Marquette, January 12, adopted resolutions urging senators and representatives from the upper peninsula to have laws enacted for the establishment of a sanatorium for tuberculosis in that part of the state.

MINNESOTA

License Revoked.—The State Board of Medical Examiners, on January 15, is said to have revoked the license of Dr. A. C. Moorhead, Minneapolis.

New Medical Society.—The Swedish Medical Society of Minneapolis, which was recently organized with the following officers, Dr. Carl J. Ringnell, president; Dr. Axel E. Hedback, vice-president; Dr. Gilbert Seashore, secretary, and Dr. Olaf A. Olson, treasurer, held its first annual banquet January 30. Dr. Carl J. Ringnell presided as toastmaster.

Bill Against Objectionable Advertising Passed.—The house of representatives, on February 2, passed a bill prohibiting the advertising or distribution of printed matter relating to so-called medical institutes. Violation of the law is made a misdemeanor, and both newspapers and advertisers are amenable to imprisonment or fine or both, at the discretion of the court. The distribution of such advertising matter in the form of pamphlets or circulars is also forbidden.

Personal.—Dr. William F. C. Heise, Winona, has been re-elected physician of Winona county.——Dr. Frederick E. Haines has been appointed chief medical inspector and quarantine physician; Drs. H. Journeay Wells, Glen Matchen, and Harry M. Guilford, medical inspectors; J. Frank Corbett, bacteriologist, and Dr. Elizabeth Woodworth, assistant bacteriologist, of Minneapolis.——Dr. Edward L. Tuohy, Duluth, has been appointed health officer of St. Louis county.——Dr. John M. Edwards, Mankato, is ill with an infection of the arm.

MISSISSIPPI

Coming Meeting.—The annual convention of the Mississippi Medical Association will be held in Jackson April 13-15, under the presidency of Dr. James W. Gray, Clarksdale. The

meeting will be of exceptional local interest because it is expected that a resolution will again be adopted urging the legislature to establish a state charity hospital in Jackson.

Personal.—Dr. Joseph W. Crumpton, Starkville, has been appointed a member of the State Board of Health, vice Dr. T. S. Richardson, deceased.——Dr. Hollie B. Wilson, Vicksburg, has been elected physician of Warren county.——Dr. Fred Meyer, sanitary lecturer for the State Board of Health, is making a tour of the state delivering popular lectures on sanitary affairs.——Dr. W. R. Thames, Hattiesburg, has been appointed physician of Perry county.

MISSOURI

Personal.—Dr. James A. Waterman, Breckenridge, has been appointed prison physician at the state penitentiary.——Dr. M. Wiley, of Springfield, while attempting to board a street car, was thrown to the ground and painfully injured.

Smallpox in College.—An epidemic of smallpox has broken out in William Jewell College, at Liberty, where 35 cases are said to be found. Although the 600 students were vaccinated on the discovery of the first cases on February 8, it has now become necessary to quarantine the institution.

Academy of Medicine Organized.—St. Joseph physicians organized an Academy of Medicine February 3 for the purpose of devoting special attention to experimentation and investigation along advanced medical lines. The officers are: President, Dr. O. Beverly Campbell; vice-president, Dr. Albert L. Gray, and secretary, Dr. John M. Bell.

Tuberculosis Exhibit.—Jackson County Society for the Relief and Prevention of Tuberculosis has completed preparations for a tuberculosis exhibit at Kansas City, beginning February 15 and continuing for two weeks. There will be meetings every noon and evening and lectures by prominent workers in the fight against tuberculosis.

Lectures to Students on Medical Organization.—Dr. Alonzo R. Kieffer, president of the State Medical Association, has appointed the following members to lecture to the senior classes in the medical colleges on the subject of medical organization: Drs. William G. Moore, St. Louis; William F. Kuhn, St. Joseph; Jefferson D. Griffith, Kansas City; and John Duncan, Columbia. It is hoped that many students will be induced to join the organized medical societies in the counties in which they locate after graduation.

St. Louis

Medical Inspection of Schools.—The board of education is perfecting plans for the establishment of a system of medical inspection of school children. Five school districts, comprising twenty-one schools, will be inspected. The appointment of inspectors will be by competitive examination. There will be one supervisor of inspection and as many inspectors as may be required to execute the duties of the department. The salary of the supervisor will be $2,500 and the salary of the inspectors will be $1,200 per annum. The superintendent has also recommended that a bacteriologic laboratory be established under the control of the board of education.

Physicians on Board of Freeholders.—The recent passage by the municipal assembly of the bill authorizing the election of thirteen freeholders to frame a new charter for the city is of great interest to the local profession inasmuch as there is now an opportunity of securing greatly needed reforms in the system of control and management of the municipal hospitals through provisions in a new charter. On invitation of the joint medical council representatives of eleven different medical and dental societies met February 13 and decided to present the names of the following four physicians to the various political parties as candidates for freeholders: Drs. John C. Morfit, George Homan, John Green, Jr., and William G. Moore.

NEW YORK

Correction.—The superintendent of Albany Hospital states that the item regarding the needs of the institution, which appeared in THE JOURNAL of February 6, is incorrect, in that the hospital is not in debt, the $45,000 debt having been cleared by popular subscription and $9,249 in addition having been received.

Vital Statistics.—The total number of births recorded in 1908 was 203,159, as against 195,735 in 1907. The total number of deaths from tuberculosis was 16,521, or 11.9 per cent. of the total mortality. From typhoid fever there were 1,368 deaths and from pneumonia 8,602, a decrease of 2,412 from the total of 1907.

To Shorten Course for Doctors.—Representatives of twenty-four colleges in the state February 9 conferred with State Education Commissioner Andrew S. Draper, regarding a change in the present rule of the board of regents requiring a seven-year course for the combined degrees of A.B. and M.D. It has been suggested that the term required for such degrees be reduced to six years. The regents will act at a future meeting.

Smallpox Bill Disputed.—The trustees of the village of Matteawan have appealed to the Appellate Court from the judgment rendered Dr. Howell S. Bonteeue for services in attending smallpox cases last spring while health officer of the village. The health officers claimed $10 a day for treating single cases and $25 a day when several cases were treated. The trustees refused to pay the claim and would allow but $150.

Proposed Increase of Pay.—The new schedule for increased compensation of physicians of the staffs of the state hospitals has been adopted by the State Commission in Lunacy. This schedule provides for an increase of 25 per cent. in the salaries paid superintendents and assistants of various grades, including medical internes. About 130 will be affected by the proposed change, which will involve an increased annual outlay by the state of $160,000.

Long Island Physicians Meet.—At the eleventh annual meeting of the Associated Physicians of Long Island, held in Brooklyn January 30, three interesting papers on "Tuberculosis" were read: Dr. Livingston Ferrand described the organized campaign against tuberculosis, Commissioner Hibbard detailed what Greater New York was doing and proposed to do with the tuberculosis problem, and Dr. James Jenkins told of the work being done by the Board of Brooklyn Charities in helping to aid and instruct the public in the prevention and cure of tuberculosis. The following officers were elected: President, Dr. Frank T. DeLano, Rockville Center; vice-presidents, Drs. Thomas R. French, Brooklyn; Frank Overton, Patchogue, and William B. Brinsmade, Brooklyn; secretary, Dr. James C. Hancock, Brooklyn, and treasurer, Dr. Charles B. Bacon, Brooklyn.

New York City

Spitters Arrested.—In one day about 200 men were arrested for violating the anti-spitting ordinance by the policemen attached to the Health Department in subway and elevated stations. Most of these spitters were fined and between $300 and $400 was added to the pension fund of the department. The fines varied from fifty cents to $3.

Plan Another Hospital.—Well-known women have undertaken the work of building a non-sectarian hospital in Second avenue between Twelfth and Thirteenth streets and a fair for its benefit, which will be opened by President Roosevelt, will be given February 20 in the Twenty-Second Regiment Armory. Governor Hughes will also deliver an address. The institution will be known as the People's Hospital.

Hospital Will Move.—Deeds have been signed by which the new site for the Presbyterian Hospital selected by the late Dr. Andrew J. McCosh has passed into the hands of the corporation. The new hospital will be built on the block bounded by 67th and 68th streets, the East River and Avenue A. The cost of the land was about $500,000. The trustees have long desired to move the hospital to a neighborhood where it could be in close touch with the poor and of greater usefulness through its daily free clinics. Work on the new hospital will be begun some time in May, 1910. The fund now on hand includes $1,000,000 given by John S. Kennedy and $100,000 that has been obtained during the past month for the Dr. McCosh Memorial fund, with which it is planned to build a surgical pavilion. The site of the present hospital will be sold and the funds thus obtained will be used in the new building. Last year the ambulances from the Presbyterian Hospital responded to 3,479 calls. There were 43,220 persons who received benefits from the hospital; 3,536 occupied beds, and of these 65 per cent. were free patients.

NORTH DAKOTA

Physician Acquitted.—Dr. James J. Reilly, Milton, charged with performing a criminal operation on a woman of Park River, has been discharged from custody. The judge claimed that the evidence introduced by the state was insufficient to warrant holding the defendant to the district court.

Bills Against Tuberculosis.—The legislative committee of the State Medical Association, of which Dr. John D. Taylor, Grand Forks, is chairman, has under consideration bills em-

bodying the following principles: That the appropriation for the use of the department of health should be at least $7,000 a year, to make it possible for that department to carry on an aggressive policy along sanitary lines; that it be made mandatory for attending physicians to report to the state health department all cases of tuberculosis coming within their knowledge, that the person infected may be supplied with information relative to the best method for the cure of the disease and the precaution necessary to take to avoid the infection of others; that spitting on sidewalks, floors, public buildings and public conveyances be declared a public nuisance, punishable on conviction by a fine of not less than $5 or more than $50, or by imprisonment in the county jail, not to exceed thirty days, or both; and that suitable and sufficient sanatoria be established and maintained at proper and desirable locations within the state and at its expense, where approved methods for the treatment of tuberculosis can be applied.

PENNSYLVANIA

Filtered Water for Pittsburg.—On February 4, the filtered water was turned into the system pipes on the south side of Pittsburg, and that section is now supplied from the filtration plant and Highland reservoir.

Tuberculosis Exhibition to Be Sent Around the State.—The Pennsylvania Society for the Prevention of Tuberculosis has decided to send to different parts of the state the society's exhibit, immediately following the close of the International Tuberculosis Exhibition which is being held in Philadelphia.

Philadelphia

Physicians Favor Proposed Legislation.—At the monthly meeting of the Southwark Medical Society and the Germantown Branch of the Philadelphia County Medical Society, resolutions were adopted endorsing the Herbst bill for one state medical examining board. The weekly bulletin of the county society says:

> Never before has the medical profession been such a unit in support of wise legislation for the people as is shown in its present support of the proposed new medical act. The faculties of the great medical schools of this teaching center have at this date an endorsement of the act under discussion, and that of the Medico-Chirurgical College has voted favorably in the matter. The following organizations, representing all phases of the Philadelphia profession, have within the past ten days acted officially in endorsement of this just measure: Northwestern Medical Society, West Philadelphia Medical Association, Philadelphia Medical Examiners Association, College of Physicians of Philadelphia, Philadelphia Obstetrical Society, Germantown Branch of the County Medical Society, Southwark Medical Society, Kensington Branch of the County Medical Society, Medical Club of Philadelphia through its executive committee, Philadelphia Pediatric Society, Philadelphia County Medical Society, Pathological Society of Philadelphia, West Branch of the County Medical Society, Northern Medical Association.

VIRGINIA

Anti-Spitting Law.—Beginning with February 8, the state law and city ordinance prohibiting spitting on sidewalks, crossings, and in street cars, which have been practically a dead letter in Richmond, will be rigidly enforced. The city ordinance provides a fine of from $2 to $5 for each offense and the state law a fine of from $1 to $5, with alternative imprisonment in jail for five days.

Anaphylaxis.—On February 6, Dr. John F. Anderson of the hygienic library of the Public Health and Marine-Hospital Service, gave an account of the work done by himself and Dr. Milton J. Rosenau on anaphylaxis to the faculty and students of the Medical Department of the University of Virginia, in the series being given under the auspices of the Medical and Biological Club of the university.

Course in Hygiene.—The medical department of the University of Virginia announces a course in practical hygiene for health officers and others interested in public health work. The course will begin June 12, and continue eight weeks. Next year the combined resources of the departments of medicine and engineering of the university expect to offer a course leading to the degree of sanitary engineer.

Personal.—Dr. L. C. Smith has resigned as assistant surgeon of the National Soldiers' Home and Dr. Samuel R. Catts, Alexandria, has been appointed in his stead.——Dr. Robert F. Williams, El Paso, Texas, formerly of Virginia, has been appointed superintendent of the Catawba Sanatorium for Consumptives.——Dr. Junius F. Lynch, Norfolk, has been appointed deputy surgeon general, medical corps, Virginia Volunteers, with the rank of lieutenant colonel.——Dr. J. Paulett Clark has succeeded Dr. Dennie M. Thomasson as assistant in the Hygeia Hospital, Lynchburg.

GENERAL NEWS AND COMMENT

Prohibits Importation of Opium.—The senate, February 2, passed the house bill to prohibit the importation of opium into the United States, excepting for medicinal purposes. It requires only the signature of the President to become a law.

Aid Asked for Carroll's Widow.—An appeal has been sent out from the office of the surgeon-general to all medical officers of the Army asking for contributions to relieve the distress in which the widow of Major James Carroll is placed. It is stated that there is a mortgage on Mrs. Carroll's home. She has a pension of $125 per month, which is not sufficient to support herself and family of seven minors.

Missouri Valley Society to Meet.—The semi-annual meeting of the Medical Society of the Missouri Valley will be held in St. Joseph March 18 and 19, under the presidency of Dr. Charles B. Hardin, Kansas City. Dr. Herman J. Boldt, New York City, will deliver the oration in surgery, and Dr. Nathan S. Davis, Chicago, the oration in medicine. After the adjournment there will be an excursion to Sulphur Springs, Ark.

Pollution of Lake Michigan.—At the meeting of the Lake Michigan Sanitary Association in Chicago, February 9, at which delegates were present from thirteen towns along the lake in Illinois, Indiana, Wisconsin and Michigan, the statement was given out that the water supply of Chicago was threatened on the south by the Calumet river and sewage from adjacent Indiana towns; from the north by the sewage from Evanston and by the refuse from shipping, especially from excursion and passenger boats, and by dumping being done in the lake. Dr. William A. Evans, Chicago, was elected president of the association; Prof. H. E. Barnard, Indiana, first vice-president; Mayor Lawrence Becker, Hammond, Ind., second vice-president; and W. R. Humphrey, Chicago, secretary.

Commemorative Gift to Sir Felix Semon.—On Jan. 1, 1909, the *Internationales Centralblatt für Laryngologie* began its twenty-fifth volume. The staff of collaborators, past and present, united in sending to the editor-in-chief, Sir Felix Semon (London, Eng.), a token of commemoration of his twenty-five years of editorship and as the founder of the journal. The gift consisted of a silver box in the shape of a bound volume, the cover being a fac simile of the monthly journal, and bearing the inscription to Sir Felix: "In love and respect as a token of their acknowledgment of his valuable services to laryngology, and in grateful recollection of his courteous consideration of themselves." At the same time the prominent laryngologic societies of the world sent letters of congratulation, dispatches, and honorary fellowships, each message breathing the hope of a long life and continuance in the work for many years. Sir Felix expressed his sincere appreciation, and stated his intention to retire from all active work, including his editorship. He had already arranged that Dr. George Finder of Berlin, the present vice-editor, should take his place. It has been a source of much gratification to his friends that all the good wishes were sent him before any one had an idea of his proposed retirement. By his action laryngology has lost a powerful champion, his contributions to the science will be sadly missed, and he carries with him the loving and grateful remembrances of those who know him best.

FOREIGN

German Roentgen Congress.—The fifth German Roentgen congress is to be held at Berlin, April 18, at the conclusion of the surgical congress. Prof. P. Krause of Jena will preside. Dr. Immelmann has charge of the exhibit; his address is Lützowstrasse 72, Berlin W. 35.

German Surgical Congress.—The thirty-eighth congress of the German Surgical Association is to convene in Berlin, April 14-17, with Prof. H. Kümmell in the chair. The meetings are to be held in the Langenbeck House where there will also be an exhibit of surgical appliances, etc.

German Congress of Orthopedic Surgery.—The eighth congress of the German Association for Orthopedic Surgery is to be held April 13 at Berlin, the day before the opening of the general surgical congress. Special attention is to be paid to congenital dislocation of the hip joint, and addresses are to be presented on twelve aspects of this subject, including one by Lorenz on his present technic for reduction and one by Becher on the anatomic and functional results of non-operative reduction in older patients. It is proposed to make a collective investigation of the results to date of non-operative reduction. In taking skiagrams of the dislocated hip joint, the anticathode of the tube should be placed at the center of

a line connecting the two anterior superior iliac spines; if possible two skiagrams should be taken of each patient, the first to determine the question of the frequency of anteversion or torsion of the femur. The feet should be placed parallel, the patella in front. The second skiagram with pronounced inward rotation is to determine the frequency of coxa vara and coxa valga with congenital dislocation of the hip. By observing these directions it will be possible to compare the skiagrams of different cases much more instructively. Prof. F. Lange will preside at the congress.

Aid for Stricken Physicians in Southern Italy.—Prof. Galli of Rome has appealed to the medical press of Germany for subscriptions to aid the medical men in the earthquake district who have lost their all, and the widows and orphans of physicians. The *Münchener med. Wochenschrift* at once opened a subscription list for the purpose, and Professor Jacobs of Brussels has opened a similar subscription in Belgium, entitled "Pro Italia medica," in charge of a committee of professors from the various Belgian universities. It is proposed to make this an international movement and Professor Ségond has been appointed the representative in France, Professor Mendes de Leon in the Netherlands and Prof. E. Pestalozza of Rome in Italy. The aim of this subscription is to care for the future of the children of medical men who lost their lives in the earthquake. The *Policlinico* at Rome opened a subscription list at once for aid for the stricken physicians, and its weekly issues acknowledge the receipt of all sums forwarded to it. The address is Administrazione del "Policlinico," Corso Umberto 1, Rome, Italy. The sums received are turned over at once to the various local medical authorities so that they can be distributed promptly and directly to the deserving. The *Policlinico* publishes in its latest issue one of the numerous letters it has received from physicians in the stricken district. The writer states that he and his surviving children are almost naked; not a single wall is left standing, and 2,500 of the 7,000 inhabitants are dead. He asks how he is going to live in this desolation and where could he go in such plight to start anew. His long and arduous life work had left him poor, he adds, but the earthquake plunged him into the abyss of every misery. And yet these medical men in this plight are performing prodigies of devotion and valor, examples of which are cited in the editorial.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, Feb. 6, 1909.

The Reform of the Army Medical Service

After the discovery of the defects in the Army Medical Service during the Boer War most sweeping reforms were made, which have been reported from time to time in THE JOURNAL. The result now is that the British army can boast of the most efficient medical services in the world. One of the results is the handsome building known as the Royal Army Medical College, built on the Thames Embankment, and equipped in the most modern fashion for the instruction of army physicians. Lord Middleton, who, as secretary of state for war, founded the college, speaking at a dinner given in his honor by the members of the college, said that never again in regard to sanitation, except on the most absolutely and exclusively medical points, would the principal medical officer in the field play "second fiddle" to any combatant officer whatever. It was now realized that for every wounded man a medical officer would have to heal he could save a dozen lives by the sanitation of his hospital, by the proper selection of the site of camps, and by control of the drinking water. This is very different from the spirit of a former commander-in-chief of the British army, Lord Wolsey, who not very long ago, in an official publication, advised commanding officers to pay no attention to the recommendations of medical officers, for he had never known one to make a wise one!

The Contamination of Canned Foods

The local government board has issued a further report on the presence of tin in canned foods in the course of which Dr. S. B. Schryver describes an experiment which he carried out on his own person in order to determine the relation between the intake and excretion of tin. For one week he took daily with meals one grain of tin salts, during a second week two grains, and during a third week three grains. At the end of a fortnight there was no evidence of a retention of tin, but when three grains were ingested daily, about two grains were retained in the system during the week. Commenting on this investigation, Dr. G. S. Buchanan, inspector of foods, says it suggests that in the case of food contaminated with tin the larger portion of the tin does not become absorbed from the alimentary canal and that accumulation in the body takes place slowly. He concludes that there is no serious risk of chronic poisoning from absorption of relatively small quantities of tin from a diet largely consisting of canned foods over considerable periods. Nevertheless, in any kind of canned foods, quantities of tin approximating to two grains to the pound must be regarded with grave suspicion, but there is no reason to suspect that in ordinary circumstances such large quantities would be present. Tin is taken up by meat extracts and essences to a greater extent than by most other meat foods, and as time goes on the quantity of tin taken up increases from the can. Dr. Buchanan suggests that health officers should direct special attention to canned foods more than one year old, and if two grains of tin are found, it may be taken that the food is potentially dangerous to health. He recommends the compulsory provision on tins of marks showing the date and place of preparation.

Nostrum Quackery Penalized in New Zealand

In many respects the Australasian colonies are in advance of the mother country in regard to their legislation. In the present year there has come into force in New Zealand very drastic legislation for the prevention of the frauds of the nostrum exploiter. Every person commits an offense who, in promoting the sale of any medicine or appliance for the treatment of disease publishes any statement which is false in any material particular relating to the ingredients, composition, structure, or to the effects which have followed or may follow the use thereof. For the first offense the penalty is a fine not exceeding $500 and for the second or any subsequent conviction not exceeding $1,000. Not only is the exploiter who publishes such statements liable to these penalties, but also the printer, publisher and proprietor of any newspaper in which they are published. Some legislation of the kind is badly needed in Great Britain. The advertisement sheets of our leading papers are largely occupied with these fraudulent statements.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, Feb. 2, 1909.

The Chair of the History of Medicine at the Faculty of Medicine at Paris

Dr. Gilbert Ballet, professor of the history of medicine and surgery in the Faculty of Medicine at Paris, has been nominated at his own request professor in the clinic of mental pathology and diseases of the brain in succession to the late Dr. Joffroy. Undoubtedly, from his entire past career, by the nature of his work, and by his competence in psychiatric matters, Dr. Ballet will be much more at home in the chair of clinical and mental pathology than in that of the history of medicine and surgery, for which, indeed, nothing marked him out as especially fitting. It is most regrettable that the chair of the history of medicine and surgery should have become merely a waiting post, a kind of lobby, as it were, that one has to pass through to attain to any other chair more eagerly sought after. For this reason, since 1899 it has been successively occupied by Professors Brissaud, Dejerine and Gilbert Ballet, all of whom, moreover, from the commencement of their course did not hesitate to proclaim their incompetence in the subject. Brissaud occupied the chair hardly a year and a half, Dejerine about six years, and Ballet less than a year and a half. The prestige of the chair, even of the faculty itself, evidently can gain nothing from these frequent changes.

A New Medical Organization: The Syndicate of Social Medicine

New economic conditions, created by the development of the laws of hygiene, of public assistance and of industrial insurance, by the increase of works of cooperation and philanthropy, by the extension of public municipal and state medical services have altered the conditions of medical practice. It is the socialization, more and more accentuated, of medicine which tends to transform the physician little by little into a public functionary, and it is precisely this tendency which the medical profession in France is seeking to combat, in claiming for all sick persons the right of freely choosing their own physician. Certain physicians have thought that in this field of public hygiene and social medicine the interests of the working people are bound up with the interests of physicians, and that consequently labor and medical organizations should draw nearer to each other for the defense of their common interests and for the success of their common demands. It is due to the inspiration of these ideas that there has recently been established a new association, the National

Syndicate of Social Medicine. This association has for its objects: (1) The study of the conditions of existence and of work imposed on physicians by modern medico-social legislation (public medical aid in all its forms, the law concerning industrial accidents, that for the protection of the public health, etc.) and the defense of their interests in this field, the determination of their requirements and the action possible to accomplish them; (2) the control of the conditions of application of medical social laws as regards both the public services, financial associations, and the various forms of insurance or administration; (3) concerted action with the labor organizations regarding everything that concerns questions of public hygiene and of social and professional medicine.

The number of possible adherents to the new organization is unlimited. When, in any region, the number of adherents shall have become sufficiently large, there will be established a district section with power to subdivide itself into local groups. Each organic unit is to preserve its autonomy as regards its mode of operation and its finances. The general action of the syndicate will be determined by the congress, which will take place yearly.

The International Congress of Hydrology and Climatology

The Eighth International Congress of Hydrology, Climatology, Geology and Physical Therapy will take place at Algiers from April 4 to 10, 1909, under the patronage of the governor of Algeria. The committee is organizing an exhibition of objects and apparatus relating to the sciences dealt with by the congress; it will comprise plates, engravings, photographs, pamphlets, etc., in regard to watering places, the number of visitors, output of bottles of water, etc., physiotherapeutic apparatus and models in relief. The organizing committee of the congress, with the assistance of the Algerian winter resort committee has also arranged excursions to interesting points in Algeria and Tunis. Particulars are furnished by M. Hérial, professor at the School of Medicine, 14 Rue d' El-Biar, Algiers.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, Jan. 20, 1909.

Arrangements for Private Patients in the Berlin City Hospitals

Some weeks ago an ordinance was proposed in the Berlin city council to provide in the city hospitals and their sanatoria special arrangements for paying patients. In the municipal hospitals there has been heretofore only a single class of patients, because the hospitals are regarded as essentially for the poor and those who belong to the working classes. Hospital affairs are under the charge of the poor authorities, and it is a result of this arrangement that those who are admitted to the municipal hospitals lose their municipal electoral rights during their stay, a disadvantage which has been repeatedly unfavorably criticized. Some of the university clinics also have no arrangements except for those without means or those belonging to the sick benefit societies, while some other clinics, such as the surgical, have provision for second and first class accommodations for the poor and also for well-to-do private patients. The denominational hospitals have almost always arrangements for both pay and charity patients. In spite of the fact that a considerable number of beds are provided for well-to-do patients in these hospitals as well as in the private sanatoria, the need of similar arrangements in the municipal hospitals has made itself felt, especially for patients of the middle class. These, among whom must surely be reckoned attorneys, judges and other officials who are not blessed with riches, are not able to pay the high expenses for nursing and medical service in the private sanitaria. On the other hand, they are hardly to be expected to take their place in a general ward of a city hospital with dozens of those belonging to the lowest classes. In the discussion in the council regarding this ordinance there were various opinions about the desirability and necessity of the innovation. The *Deutsche medizinische Wochenschrift* sent out the following question blank to the directors of 130 hospitals of the large cities of Germany, to obtain information to aid in the decision:

1. Are there special arrangements for paying patients in the hospital conducted by you? If so: *a.* What are the details of the arrangement (expenses, demand for single room, special diet, etc.)? *b.* Do the attending physicians and assistant physicians receive special fees from these patients? *c.* Are these provisions taken advantage of to a large extent, and specially by what class of the population? *d.* How long has this arrangement been in operation? What is your experience and your opinion in general?

2. If such arrangements do not exist do you regard them as necessary or desirable or have you any objections and what are they?

To this circular 72 answers were received referring to 59 hospitals. Of these, aside from Berlin, only five have no accommodations for paying patients; all the rest receive paying patients of the first and second classes. In almost all cases patients of the first class have a private room; those of the second class are received in a room of two to three beds. In some municipal hospitals special buildings for these pay patients have been erected. The prices per day at the municipal hospitals vary between 6 and 24 marks ($1.50 to $6.00) for the first class, and between 3.75 to 12 marks (90 cents to $3.00) for the second. The patronage is almost always very good and the patients are recruited from all classes of society. The need of the arrangement was denied by only three hospital directors. With this exception, the provision for paying patients is regarded as appropriate and desirable. One of the directors remarks that according to his experience, those who possess small to moderate means are the worst cared for. The poor are well provided for in the hospitals and the rich in the sanatoria. The important and interesting matter, from a medical standpoint, of the fees paid by these patients is variously arranged. In a small number of the hospitals answering this circular physicians receive no compensation for the treatment of the patients, but in two municipal hospitals they are given a part of the sum paid by patients for expenses. In a large number of hospitals the head physicians have a limited right to receive fees; thus, only for operations or only for visits to patients of the first class outside of regular visiting hours. Almost all the hospital directors express themselves in favor of giving physicians the right to charge fees, and in fact a demand for this provision should be made, as it seems unreasonable that well-to-do patients should receive medical service in the hospitals free of charge. How the Berlin authorities will decide the matter is uncertain, but the proposed ordinance has been referred to a special committee.

Scientific Societies in Berlin

Heubner has added another to the many medical societies of Berlin in the form of a pediatric society which ought to be merely a branch of the society for internal medicine that has been in existence for thirty years under the presidency of Leyden. There are some fifty medical societies which have as their field Germany as a whole or a large part thereof, and there are no less than twenty different medical societies in Berlin. Of these the Berlin Medical Society is the largest, with 1,600 members. Its founder was the renowned oculist, v. Graefe, who was followed by Langenbeck, Virchow, v. Bergmann, and finally Senator. The presidency of this society is regarded as a high honor. In point of numbers and importance this society is followed in order by the Society of Internal Medicine, the Berlin Surgical Society, the Society of Obstetrics and Gynecology, the Society for Psychiatry and Nervous Diseases, etc.

The Surgical Society is presided over by a different president at each meeting, chosen from a group which includes the directors of the largest surgical clinics in Berlin.

The Virchow Monument

The kaiser, probably wishing to promote harmony with his subjects, which he finds very desirable in consequence of his late unpopularity, has recalled his veto of the Virchow monument design and has approved the second sketch, and the monument will now be erected on the Karl Platz near the Charité. Thus Berlin, which has had erected in the last decade a series of bad monuments, will be enriched by the addition of another scarcely satisfactory one. The compromise of the kaiser indicates that his efforts at harmony may go too far but it is to be hoped that nothing worse in this direction will develop.

Notification of Tuberculosis

Differing from Prussia, as I mentioned in a previous letter, the authorities in Lübeck some months ago required physicians not only to report deaths from tuberculosis but to notify the occurrence of open pulmonary or laryngeal tuberculosis, especially if the patient removes from his dwelling or is carried to a hospital or if in consequence of his condition or that of the dwelling he endangers his environment to a high degree or is engaged in the commercial production or sale of provisions or lives in a place where he is likely to endanger a considerable number of persons, as in a school building, boarding house, poorhouse, etc.

V 19

Pharmacology

RUPERT WELLS, M.D.

A Cancer Cure Quack Whom the Postoffice Authorities Have Declared a Fraud *

Rupert Wells, M.D., the "cancer cure" faker of St. Louis, has been denied the use of the United States mails by the Postoffice Department which, a few days ago, issued a fraud order against this notorious quack. Samuel Hopkins Adams, in his "Great American Fraud" series, paid his respects to Wells—whose real name, according to the Postoffice officials, is Dennis Dupuis—and called attention to the fact that Wells was one of the first to recognize the commercial possibilities of the public's interest in radium as an asset to quackery.

ADVERTISING MYTHS

To furnish good advertising "copy," Wells invented a mythical "Postgraduate College of Electrotherapeutics of St. Louis," and forthwith appointed himself to an equally mythical chair of Radiotherapy. His hypothetical professorship in a nonexistent college was, like his fictitious name, of use only for business purposes. Says Mr. Adams:

"Rupert Wells, M.D., is very religious—in his advertisements. He loves the church papers. The weeklies with smug and pious editorials, and no conscience whatever in the matter of paid advertising, are his green pastures. He is a home-and-fireside cuddler, is Rupert. He is also a ground-and-lofty liar of the most complete and soul-satisfying description. You can read whole pages of his 'literature' and not come on one single statement tainted with truth."

HOW WELLS CAUGHT HIS VICTIMS

Of the "cure" itself and its methods of exploitation, the official report from the Postoffice Department says:

"Dupuis causes to be published extensively throughout the country advertisements over the name of Dr. Rupert Wells, giving his address as Saint Louis, Missouri, inviting those persons who may believe they are afflicted with cancer to write to him for free information about his treatment for the cure of that disease, and in those advertisements makes such statements as these:

"'I can cure cancer at home without pain, plaster or operation. I have discovered a new and seemingly unfailing remedy for the deadly cancer. I have made some most astonishing cures. My marvelous radiotized fluid did it. No matter what your condition may be, do not hesitate to write.'

I Can Cure Cancer
At Home Without Pain, Plaster or Operation and I Tell You How, Free.
I Have Proven Cancer Can be Cured at Home No Pain, No Plaster, No Knife—Dr. Wells
I have discovered a new and seemingly unfailing remedy for the deadly cancer. I have made some most astonishing cures. I believe my

The Characteristic Pose of the Quack.

"To the person writing to Dr. Rupert Wells in answer to these advertisements, Dupuis causes to be mailed printed letters and circulars over the name of Dr. D. Rupert Wells, describing his treatment and soliciting its purchase at the price of $15.00 a month. If the inquirer does not purchase the treatment promptly, quantities of other letters and circulars are mailed to him importuning the purchase of the treatment and by steps reducing the price, first to $10.00, next to $5.00, and then to $2.50. These solicitations for the purchase of the treatment are made absolutely without inquiry by the advertiser as to the condition of the correspondent, or whether he is actually afflicted with cancer, or in what form or location the disease may be present, but the correspondent is solicited to buy and take the treatment simply on his own assumption that he may be suffering from the disease."

POSSIBILITIES IN HYDRANT WATER

The "marvelous radiotized fluid" which formed "Dr. Wells'" stock in trade was known as "Radol (Wells)," and came in two forms, for external and for internal use, respectively. Mr. Adams tells us that the analysis made for him of this "radium impregnated fluid" disclosed the fact that it contained "exactly as much radium as dishwater does." The investigations of the Postoffice authorities confirm the earlier analysis. Says the official report:

"The Department of Agriculture purchased from the advertiser samples of 'Radol' and made analyses of same. The investigations disclosed that the fluid for internal use consisted essentially of a weak, acidulated solution of quinin sulphate in water and alcohol in the proportion of about 1¼ grains quinin to the ounce of the fluid solution and about 7 per cent. alcohol. The fluid for external use was found to be a watery solution containing about 10 per cent. of glycerin and a small quantity of inorganic salts. Both solutions were tested for radioactivity. No such activity was detected in an amount appreciably greater than is to be commonly found in ordinary hydrant water."

PSYCHIC VALUE OF ACIDULATED QUININ

Should one wonder, Why use quinin sulphate in acid solution as a fake "cancer cure"? the explanation is forthcoming from the following, also taken from the government report:

"In this connection it also should be noted that the advertising literature calls particular attention to a 'bluish fluorescent glow imparted to it (Radol) by the Radium,' as evidencing the presence of radio-activity. It is well-known that an acid solution of quinin sulphate exhibts such fluorescence. The analyses show this fluid to be such a solution."

"A DELIBERATE AND INTENTIONAL FRAUD"

The Assistant Attorney-General in passing on the case and deciding whether Dennis Dupuis *alias* Rupert Wells, M.D., was engaged in honestly practicing his profession, or whether he was practicing a scheme to defraud, reported as follows:

"A careful consideration of the circumstances of this case have convinced me, and I believe they will you, that the operations of this person are not purified with good faith, but that he has been and is practicing a deliberate and intentional fraud. . . . The fact which is clearly established by the evidence that Radol contains no appreciable amount of radioactive property, clearly negatives, I think, any idea that this person honestly believes his claim to cure by this treatment, cancer, without reservation as to its form, stage or location, and proves conclusively that he is not engaged in the business of treating and curing, or endeavoring to cure, applicants, but is simply practicing a scheme and artifice to defraud. His claim to cure cancer in all forms and stages and in any location I find is false and known by him to be false. . . ."

A SEVENTY-THOUSAND DOLLAR BUSINESS

". . . The size of this business is indicated by the report of the postmaster that the first-class mail the week of his report averaged about 70 pieces a day; also by the statement made at the hearing for respondent that he sent out on an average about 25 treatments a day, some of which he stated were free. According to this statement, and counting only week days, about 7,800 treatments were sent out in 1908. That year the respondent stated that he sent out over 1,000 free treatments. He was then paid for between 6,500 and 7,000 treatments. The price varied from $2.50 to $15.00—but if the average were $10.00, he was paid in 1908 about $70,000.00.

"I find that the operations of this person, under the name of Dr. D. Rupert Wells, is a scheme for obtaining money through the mails by means of false and fraudulent pretenses, representations and promises, and I recommend that a fraud order be issued against the address, Dr. D. Rupert Wells and Dr. Rupert Wells, at St. Louis, Missouri."

Thus one more of the Great American Frauds has received its official *coup de grâce*. In spite of the transparency of the humbug and the heartlessness of the fake, the case was a stubbornly contested one and "Dr. Wells" was defended by legal talent drawn from both St. Louis and Chicago. That such a stupendous fake should have been able to exist and flourish for so many years, and that, too, after its thoroughgoing exposure in Mr. Adams' "Great American Fraud" series, is a sad commentary on the gullibility and ignorance of the public in medical matters. Yet but for the activity of the government officials the hopeful victims of a hopeless and cruelly painful malady would still be impoverishing themselves to purchase Rupert Wells' weak solution of quinin. The faker himself, however, is not the only guilty person con-

* A reprint of this matter, somewhat elaborated, will be issued in pamphlet form.

nected with this heartless scheme; equally guilty are the editors and proprietors of those journals—religious and lay—which have accepted their share in the toll of pain and death by giving publicity to Rupert Wells and his "cure." Printer's ink is the very life blood of quackery; take away the support and moral influence afforded by the press through its advertising pages and Rupert Wells and others of his kind would seek more reputable, albeit less profitable fields of operation. The work that the government officials are doing in exposing and in rendering innocuous fraud and deceit wherever it may exist, is deserving of the highest commendation, not only from the medical profession but more particularly from the general public.

Correspondence

Colonial Medical Service in the Fiji Islands

To the Editor:—The medical affairs of Fiji, as well as other colonial interests in these islands, are centered in Suva, which is situated on the south coast of the island of Viti Levu. Suva, the capital of the group since 1882, is the chief commercial port in the islands. Of the 4,000 inhabitants, less than one-third are Europeans, the population being composed of native Fijians, Polynesian and East Indian immigrants.

Suva is a well-groomed little town nestled among the green hills of the highest volcanic island in the Fiji group. A natural harbor is formed by coral reefs which furnish excellent protection from the south seas, and permit anchorage of large ships within the reefs. The climate is warm but healthful. The mean temperature is about 80 F. The extremes lie between 60 and 94 F. From October until April the climate is hot and dry. The winter months are cool and attended by rain and winds. Many days, in winter, however, are delightful, the southeast winds blowing over the islands being only cool enough for comfort.

The anopheles mosquito is unknown, but the *Stegomyia fasciata* abounds, and only awaits the introduction of a case of yellow fever to cause this disease to take a prominent place in the calendar of Fijian diseases.

The Polynesian immigrant question is an important one among the predisposing causes of disease in Fiji, and, that one may better understand the prevalence of certain diseases, and the organization now maintained for their prevention and cure, it might be well to mention briefly the system of immigration and the relation that immigrants bear to disease. The following statistics were taken from the report of the agent general of immigration for 1907, on Polynesian immigration.

Immigrants were introduced during 1907 from Solomon Islands, New Hebrides, Banks, Torres and Queensland; 570 males and 2 females were admitted during the year, and 347 of these were allotted and indentured to employers for work on plantations, sugar refining companies, government work in Suva and the constabulary.

The total number of deaths from disease reported during the year was 56, classified as follows: Dysentery, 12; fever, 2; tuberculosis, 2; pneumonia, 1; leprosy, 1; meningitis, 3; diarrhea, 2; liver abscess, 1; brain abscess, 1; lunacy, 1; heart failure, 1; influenza, 1; unknown or unstated, 16. In addition to these, 6 deaths were reported in the Colonial Hospital, 3 at the leper asylum, and 6 in Suva.

The following report of the chief medical officer on "Leprosy in the Colony for 1907" will give an idea of the prevalence of other diseases than those given in the mortality table, and the relation of immigration to the spread of those diseases: "The class most surely and rapidly invaded here is the Melanesian immigrant. His habits of living in small, ill-constructed and crowded dwellings, of wearing white men's apparel, of frequently changing articles of clothing with another, of personal uncleanliness, and his proneness to harbor body parasites of all sorts, are factors which place him in the best possible circumstances for acquiring disease—especially leprosy, yaws and tuberculosis from his fellows. Some dozen of these unfortunates are at present inmates of the asylum at Beqa."

The colonial medical and sanitary work is carried on entirely by a government staff of physicians, although native students are now being educated for medical work, of which I will speak later.

"The Honorable the Chief Medical Officer" is the title of Dr. Corney, who has charge of the medical and sanitary work for the entire Fijian group. Dr. Corney is a graduate of St. Thomas and of Oxford University, and has been a resident of Fiji for 35 years. He lives in Suva, and, although he is not on the visiting staff of the medical institutions in Suva, he lectures at the Colonial Hospital when other duties will permit.

Dr. Lynch, chief medical officer of the colony, is visiting physician at the hospital, asylum for the insane, government jail, and holds the position of health officer of the port of Suva. I did not have the pleasure of meeting either of these gentlemen. For my personal observation of cases, and much valuable information concerning medical affairs in Suva, I am indebted to Dr. G. H. Hustler, resident medical officer at the Colonial Hospital.

Dr. Hustler is an energetic young English physician and a thorough student of tropical diseases. He is a graduate of Leeds University and served with Sir Patrick Manson at the London School of Tropical Medicine. The doctor made me at home in his wards and answered my myriad of questions with the grace and patience of a college professor.

The Colonial Hospital, built about 25 years ago, is a government institution for the care of both Europeans and natives. It is maintained by the government, and the staff is composed of government officials. The hospital is situated about two miles from Suva. It consists of ten buildings grouped on a beautiful wooded and vine-clad hill overlooking the bay. The buildings are one-story wooden structures, constructed like most tropical buildings, with deep open windows and verandas.

The grounds are rich in tropical trees and plants, and winding paths lead from one ward to another.

The central, or administration building, contains the dispensary, office, consulting and examining rooms. The wards, or blocks, as they are called, are given up to classified diseases, and the European, Fijian and Indian wards are in separate buildings. The physicians' house, nurses' home, laboratory, morgue, isolation ward for dysentery, and kitchen compose the remainder of the group of buildings.

The capacity of the hospital is 120 patients, the average number is about 80.

Native patients are admitted for two shillings a day, this fee being paid by the employers, or the native office, in the case of Fijians, and by the plantation managers or the Destitute Indian Fund, in the case of East Indians.

The patients are about equally divided as to nativity among Europeans, Fijians and Indians. A matron and six European nurses are employed at salaries slightly smaller than those paid nurses in our city hospitals. They come to Fiji from England and Australia as probationers, and after learning the hospital routine and the Fijian language they assist in teaching the native students. Their course of training is three years, and besides instruction in the wards consists of lectures given twice weekly by members of the staff.

Besides the European nurses, there are in training, for native physicians, 14 students ranging from 18 to 21 years of age. Their course is also three years, and if at the end of that time they pass satisfactory examinations they are graduated as physicians for native work.

I was informed by Dr. Hustler that these students are devoted to their work, learn quickly and are cleanly and careful in their habits. They are intensely interested in geography. The progress of these students is somewhat handicapped by the fact that they can not read or write English, and but few can speak it. Their work during much of the course is done in the wards under the instruction of European nurses who speak the Fijian language.

It is the intention of the government to train midwives here also, and to bring about the custom of sending obstetric

cases in from the plantations for treatment, and to furnish instruction and practice for the midwives.

The resident medical officer of the Colonial Hospital receives a yearly salary of £300 ($1,500).

Fiji furnishes a liberal and instructive clinic of tropical diseases, many of which are brought in by the Polynesians and Indians. Syphilis is unknown in the islands. Tuberculosis is frequently seen, and is on the increase in the colonies.

Malaria is unheard of except an occasional case brought from Calcutta and other Indian ports by immigrants.

I was much interested in the treatment of dysentery which is rather prevalent in the colony, and of which I saw many cases in the hospital. Dr. Hustler says nearly all the cases are amebic. Patients with dysentery are kept isolated until they cease passing blood and mucus, are relieved of pain and tenesmus, and are able to take full diet. Santonin is used extensively in the treatment of this disease. The drug is given in full doses three times every second day, preceded by sodium sulphate 4 drams. On alternate days bismuth and salol are given. Daily injections of quinin are used in strengths of 1 to 2,000 and 1 to 1,000, but the administration of santonin and bismuth is the routine treatment.

The diet consists of milk, albumin water, and during convalescence, arrow root.

Through the kindness of Dr. Hustler, I examined several cases of frambesia (yaws). This syphilis-like disease is very common in Fiji, particularly among the immigrants from the islands of the Pacific. The reason for its prevalence among these classes is given in the report of the chief medical officer on immigration and leprosy. I was informed that most of the cases which come under treatment are in the tertiary stage, the initial fever and stage of eruption probably passing unnoticed by the patients, or if noticed, do not incapacitate them for work on the plantations. The lesions of the tertiary stage are seen most frequently on the face, hands and legs, although cases are seen here in which the lesions are generally distributed. One of the most typical cases of this disease was that of an adult East Indian woman who was admitted to the hospital five days before my visit. As many such patients do, she came without history from one of the plantations, and as she spoke neither English nor Fijian, the only information to be had was from the disease she presented. The lesions in this case were confined entirely to the face and limbs; those on the face were few but striking in appearance. They consisted of oval granulating ulcers, varying in their longest diameter from ¼ to ½ inch. The surface stood out about ⅛ inch from the surounding healthy skin. The granulations were smooth and reddish yellow in color.

On the legs (tibial region) were several cicatrices of healed lesions which looked not unlike small keloids except that their color was a healthy pink. The patient was not well nourished, and the skin was dry and somewhat scaly in the region of the leg lesions. Pallor about the lips, conjunctiva and nostrils indicated a condition of anemia.

The yaws patients are allowed to run about the grounds of their own block, and to mingle with other patients in the ward. The lesions are kept well covered, however, and according to Dr. Hustler, infection from the patients does not occur in this hospital. He related an instance of a child in Fiji who was infected after long and constant association with a yaws patient.

The treatment of yaws consists of general hygienic measures, potassium iodid, grs. x to xx in aqueous solution three times a day, combined with iron in some form (usually ferri et ammonii citras) as a tonic. Mercury is sometimes given, but the administration of potassium iodid is the routine treatment. The ulcers are dressed with dilute citrin ointment. When the granulations become unhealthy and flabby, curettage is done.

I saw many cases of filariasis, which is a common infection in Fiji. The *Filaria diurna* is frequently found. The patients were for the most part affected with elephantiasis.

Dr. Hustler spoke favorably of thiosinamin in the treatment of elephantiasis. He injects hypodermically 3 c.c. every second day. This treatment, combined with rest, elevation of the parts affected, bandaging and massage, causes a decrease in the swelling and general improvement in the patient's condition. The injection of thiosinamin causes no pain, and abscesses do not form at the seat of the injection.

Ankylostomiasis is treated largely by the use of thymol, grs. xxx, repeated every three hours for one day, the thymol being preceded by compound chalk mixture. Tonic treatment by iron, quinin and arsenic in the form of Fowler's solution is used as a supplementary measure.

Cancer is rare in Fiji. I saw one case of cancer of the cervix in the hospital wards.

Epidemic typhoid is not seen in Suva, but occasional outbreaks occur on the plantations of the interior.

Dengue, influenza, tuberculosis, liver abscess, pyemia and a case of a native boy who stuck a knife in either side of a sprained ankle to relieve the pain and swelling, composed the remainder of the clinic furnished by the Colonial Hospital at Suva. It is needless to say that the boy with the sprained ankle was suffering from infection. The bones of the ankle were necrotic and amputation was to be performed soon after my visit.

About 1 per cent. of the native population and immigrants, taken together, are afflicted with leprosy. A colonial ordinance went into effect Aug. 10, 1908, by which all the lepers in the colony were segregated on the island of Beqa. Eight lepers were rejected among the Polynesian immigrants in 1907.

B. F. JENNESS,
P. A. Surgeon, U. S. Navy, Talcahuana, Chile.

Miscellany

Clippings from Lay Exchanges

"CRITICALLY ILL WITH A LIGHT ATTACK."

"Friends of ——— will be sorry to learn that his son, Harold, is critically ill with a light attack of scarlet fever."—*Wheeling* (W. Va.) *Intelligencer.*

* * *

"HIS FRACTURED SKULL SETS ITSELF."

"Paul S. is doing nicely to-day and is able to be around again, even with a fractured skull. A notable feature of the early recovery of the young man is the act of practical self-healing of the fractured skull. A lump as large as the proverbial hen's egg was formed on the injured ballplayer's forehead, and the intense swelling actually drew the bone back to place almost completely. Instead of the large hole in his head, there is now but a slight dent back of the painful mound."—*Iowa City* (Ia.) *Daily Press.*

* * *

"DELICATE SURGICAL OPERATION."

The *Pocatello* (Idaho) *Tribune* thus graphically describes an operation on a ruptured six weeks ectopic gestation:

"One of the most delicate and most difficult operations known to the marvellous science of surgery was performed by ———, assisted by ———. The operation was one of those peculiar ones where the knife of the surgeon is the only thing to avert death, with the chances of recovery as 1 to 100. Thanks to the skill of Dr. ———, and his most able assistant, the patient ——— will fully recover. So dangerous was the operation, and so near was the patient to that mysterious bourne from which no traveler ever returns, that it was not until the last delicate incision was made, that the surgeons drew a breath of relief and announced success. The operation was of a most unusual obstetric variety. The lay mind can hardly grasp its delicate and difficult nature, and its successful consummation in the case of ——— evidences the possession by Dr. ——— and Dr. ——— of extraordinary ability."

Psychic Treatment of Functional Neurosis.—Dr. J. Grinker, in the *Quarterly Bulletin of Northwestern University Medical School*, December, 1908, reports a case of traumatic hysteria successfully treated by psychic methods consisting entirely in explanations, persuasion, forceful suggestions, threats and promises of rewards. The patient, a woman of 50, sustained

an insignificant trauma in the right knee. Several days later she developed a typical case of traumatic hysteria. The right knee was painful and stiff and the entire right leg then became paralyzed. Various diagnoses had been made and all kinds of treatment were administered. When she came under Grinker's observation she had been a confirmed invalid for eight months, spending her time between the bed and an invalid chair. The diagnosis was traumatic hysteria; and the treatment purely psychical. In a few weeks from the beginning of treatment she was able to walk and attend to her household duties. She has now been well for over four and one-half years. Grinker declares that when the general practitioner devotes more time to the patient's mentality, the ground will slip from under the feet of the "Christian Scientist" and other "healers," who now thrive on the stupidity of mankind and endeavor to perpetuate its superstitious credulity.

Extension Treatment of Fracture of the Leg.—Dr. E. C. Riebel, in the *Quarterly Bulletin of Northwestern University Medical School*, December, 1908, prefers Hennequin's apparatus in oblique fracture of the leg, as well as in comminuted and compound fractures, as it secures the advantages of a double inclined plane with horizontal position of the leg, gravity of the leg being transposed into traction. The apparatus is expensive and may be replaced by a simpler one omitting this last feature. A frame is made of gas pipe 9 inches high, from 8 to 8½ inches wide and 20 inches long. This consists of two lateral and two cross pieces. It is open at either end above. To this is joined a U piece for the femur, 13¼ inches long, somewhat wider than the frame and movable on it to allow adjustment at any angle. Both are covered with duck cloth. Extension is made by means of a plaster shoe. Application requires great care to avoid decubitus; sufficient padding must be applied. A shoe is made by circular application of a plaster-of-Paris bandage. The shoe is then covered with oiled paper or rubber cloth and a posterior moulded splint applied from the calf to the sole of the foot. The apparatus should be perfectly level when placed in the bed. By cutting a window in the splint and using duck strips for a hammock, wounds on the posterior surface of the leg may be dressed *in situ*. The extension is made by a pulley. The cord is attached to a loop of bandage incorporated in the shoe. About four pounds traction will suffice in fresh fractures to begin with; this may be increased by a pound every day up to seven pounds. In older fractures, from nine to ten pounds are required. Traction is tolerated better by day than by night. Any surplus above six pounds should be removed at night and added again by day.

Native Doctors in South Africa.—In Natal, the native doctors, says the *British Medical Journal*, are at present accorded a definite standing by the legislature; indeed, for all practical legal purposes their position scarcely differs from that of fully-qualified European practitioners. Like the latter, they are expected to take out an annual license, for which the government receives a fee of £3 ($15), and their legal recognition is so complete that within recent times certain members of this class have been allowed to use the law courts for the enforcement of the payment of fees from patients. Nevertheless, so far as real medical knowledge is concerned, they are natives pure and simple, whom it would not be easy to differentiate from the tribal "doctors," obeah men, and witch finders of the west coast of Africa. In spite of their ignorance, however, they are able, as a recent trial revealed, to get hold of the most powerful European poisons, and case after case during the past few years has shown that, they are a danger to the public in other ways. Many charges of murder have originated owing to their existence, and though the accused have not always been found guilty, the trials left little room for doubt that murders are from time to time committed with a view to obtaining the heart and other parts of the human body, which in native medicine are considered of value in treatment. Furthermore, the Dinizulu inquiry and other investigations into the circumstances attending the last Kaffir rising suffice to show that men of this class exercise a strong influence over native minds, and that "doctoring for war," in which human blood and bones play a part, is still in existence. Men of the same type are doubtless to be found in all semicivilized areas, but when a colony has reached a development such as that of Natal it is difficult to believe that they are any but a retarding influence, helping to keep up customs and habits which, in the interest of all, should pass away.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

BOOKS ON HYPNOTISM, SUGGESTION AND PSYCHOTHERAPY

To the Editor:—In THE JOURNAL, February 13, page 577, a correspondent asks for books on the above subjects. May I say that I consider the Nancy school as the real scientific and rational school of hypnotists, and that it is important for an amateur to start right, in taking up this study. Forel's "Hypnotism, or Suggestion and Psychotherapy," published by Rebman Company, New York, $3.00, should be read by everybody. Another good author, of this school, is Bernheim, and his book is "Suggestive Therapeutics" (Hypnotism), published by Putnam's Sons, price $3.50. Another good book to prepare the student is "Introduction to Physiological Psychology," by T. Ziehen, Macmillan Company, $1.50. I had to search my own way, and having "found myself" on this subject, hope these lines will be of benefit to all interested.

EDWARD CORNELIUS PERRY, Avon, N. Y.

FERMENT ACTING ON CELLULOSE IN ANIMALS: MORPHOLOGY AND CULTURAL CHARACTERISTICS OF THE BULGARIAN BACILLUS

To the Editor:—Please refer me to literature on the ferment that acts on cellulose in animals, and also describe the morphology and cultural characteristics of the Bulgarian bacillus.

J. E. B. ZIEGLER, Baltimore.

ANSWER.—1. The following references are given by von Noorden in his book "Metabolism and Practical Medicine," 1907, as dealing with the digestion of cellulose:

Weiske: Der Cellulose beim Mensch., *Zeitschrift f. Biologie*, 1870, p. 456.

Knieriem: Der Cellulose im tierisch. Organismus, *Zeitschrift f. Biologie*, 1885, p. 67.

Constantinidi: Ausnutzung des Weizenklebers im Darmkanal, *Zeitschrift f. Biologie*, 1887, p. 433.

Tappeiner: Die Gärungen der Cellulose, *Zeitschrift f. Biologie*, 1884, p. 52.

Muller: Celluloseverdauung im Dünndarm. *Archiv. für die ges. Physiol. des Menschen*, 1901, p. 619.

Henneberg u. Stohmann: Cellulosegärung für die Ernährung, *Zeitschrift f. Biologie*, 1885, p. 613.

Wilsing: Ueber die Mengen der vom Wiederkäuer in den Entleerungen ausgeschiedenen flüchtigen Säuren, *Zeitschrift f. Biologie*, 1885, p. 625.

2. *B. bulgaricus* is usually a stout and rather long bacillus, sometimes straight, sometimes curved; occasionally shorter forms occur, especially in the absence of acid. The ends are square; long filaments are frequent. The bacillus stains well with ordinary aniilin dyes, and with methylene blue or carbol fuchsin; granules often appear with unstained portions, resembling vacuoles. It is positive to Gram's stain, appearing deeply blue, or violet. In old cultures the Gram stain may be negative or partially so and if counterstained with dilute carbolfuchsin part of the filament may be blue and part red. The bacillus is non-motile and probably does not form spores. Gas is not produced from sugars. There is little or no growth on ordinary laboratory media at low temperatures; only milk seems favorable at any temperature. At 37° C. there is better growth and the optimum temperature seems to be from 42 to 44° C. There is but little growth on plain sugar at any temperature. If 1 or 2 per cent. glucose be added the growth is much better. The micro-organism grows anaërobically as well or better than aërobically. On gelatin with the addition of glucose some strains seem to grow, very slowly and sparingly. On potato there seems to be no growth. Litmus milk is strongly acidified, decolorized and slowly coagulated. The amount of acid formed in milk may reach 3 per cent. (as lactic acid), the amount increasing slowly at first but rather rapidly after four or five days. The butter fat is slightly decomposed and the casein is slowly peptonized. The organism is preserved best in milk but loses vitality rather rapidly. There are undoubtedly several strains of Bulgarian bacillus. The morphology varies somewhat, but is always characteristic as described. The amount of acid produced in milk varies with different varieties. A variety has been described which produces a slimy milk.

ANTIDOTE FOR FORMALIN

To the Editor:—In the article by O. P. Humpstone and W. Lintz on "Formalin Poisoning," in THE JOURNAL, Jan. 30, 1909, p. 380, it is stated that "no antidote for this poison has yet been found." Chemically, ammonia water is a perfect antidote, as it combines with formaldehyd according to the following equation: $6CH_2O + 4NH_3 = (CH_2)_6N_4 + 6H_2O$ to form hexamethylene tetramin (hexamethylenamin, U. S. P.), which is a non-irritating substance. The ammonia should be given in dilute form and followed by copious irrigations of plain water. G. C. BOLTIN, Neeses, S. C.

ANSWER.—Our correspondent does well to emphasize this remedy, which ought to be more generally known. A case is cited by Peterson and Haines, "Legal Medicine and Toxicology," Vol. II, p. 546, in which the administration of a dilute solution of ammonia seemed to give good results. (See André, *Jour. de Pharm. et de Chimie*, 1899, x, p. 10.) The equation above given requires about one-fourth as much ammonia by weight as of formaldehyd, so that we can conveniently remember that one volume of 10 per cent. ammonia will neutralize an equal volume of 40 per cent. formaldehyd solution. In case ammonia is not at hand no time should be wasted, but the stomach or bowels should be immediately washed out with plain water or salt solution.

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending Feb. 13, 1909:

Davis, W. B., col., and Rhoads, T. L., major, sailed on the *Sheridan* from San Francisco for Manila, P. I., Feb. 5.

McIntyre, H. B., lieut., granted leave of absence for one month.

Siler, J. F., capt., relieved from duty at Fort Slocum, N. Y., and ordered to Fort Jay, N. Y., for duty.

Hartsock, F. M., major, granted leave of absence for four months, with permission to go beyond sea.

Adair, G. W., col., granted leave of absence for four months.

Duval, D. F., major, granted leave of absence for four months.

Birmingham, H. P., lieut.-col., relieved from duty in Cuba and ordered to Washington, D. C., for temporary duty in the office of the Surgeon General.

Juenemann, G. F., capt., granted leave of absence for two months.

Appel, A. H., lieut.-col., granted leave of absence for 30 days.

McPheeters, S. B., M. R. C., ordered, upon arrival at San Francisco, to proceed to his home and report for orders.

Smith, R. D., M. R. C., honorably discharged from the service of the United States, Feb. 16, 1909.

Phelan, H. du R., M. R. C., relieved from duty at Fort Baker, Cal., and ordered to Fort Shafter, H. T., for duty.

Farrow, E. J., M. R. C., sailed on the *Sheridan* from San Francisco, for Manila, P. I., Feb. 5, from leave of absence.

Tyler, G. T., M. R. C., ordered to return from Fort Jay, N. Y., to his proper station, Fort Porter, N. Y.

Boak, S. D., dent. surg., granted leave of absence for one month, upon arrival in the United States from Cuba.

Casaday, G. H., dent. surg., sailed on the *Sheridan* from San Francisco for Honolulu, H. T., Feb. 5.

Health Reports

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Feb. 12, 1909:

SMALLPOX—UNITED STATES

Alabama: Mobile, Feb. 9, 1 case.
California: Los Angeles, Jan. 16-23, 2 cases; San Francisco, 1 case.
District of Columbia: Washington, Jan. 23-30, 1 case.
Indiana: Elkhart, Jan. 23-30, 1 case; Evansville, 4 cases; Indianapolis, Jan. 24-31, 2 cases; Lafayette, Jan. 25-Feb. 1, 5 cases.
Kansas: Topeka, Jan. 23-30, 13 cases.
Iowa: Dubuque, Oct. 1-Feb. 5, 89 cases, 1 death.
Kentucky: Lexington, Jan. 23-30, 3 cases; Newport, 13 cases.
Louisiana: New Orleans, Jan. 23-30, 7 cases.
Maine: Van Buren, Jan. 23-30, 8 cases.
Michigan: Detroit, Jan. 23-30, 3 cases; Grand Rapids, 1 case; Saginaw, Jan. 16-23, 1 case.
Missouri: Kansas City, Jan. 23-30, 1 case; St. Louis, 2 cases.
Montana: Butte, Jan. 12-19, 1 case.
Nebraska: South Omaha, Jan. 9-16, 1 case.
New York: Syracuse, Jan. 1-31, 3 cases.
Ohio: Cincinnati, Jan. 8-27, 42 cases, 1 death; Dayton, Jan. 23-30, 2 cases.
Tennessee: Knoxville, Jan. 23-30, 1 case; Nashville, 7 cases.
Utah: General, Dec. 1-30, 24 cases.
Virginia: Lynchburg, Jan. 23-30, 1 case.
Wisconsin: Lacrosse, Jan. 23-30, 2 cases; Milwaukee, 19 cases.

SMALLPOX—INSULAR

Philippine Islands: Manila, Dec. 5-12, 3 cases.

SMALLPOX—FOREIGN

Arabia: Aden, Dec. 21-Jan. 5, 5 deaths.
Canada: Ontario Province, Dec. 1-31, 118 cases, 1 death.
Ceylon: Colombo, Nov. 21-Dec. 5, 26 cases, 8 deaths.
Chile: Valparaiso, Dec. 5-12, 1 case.
France: Paris, Jan. 9-16, 2 cases.
Germany: General, Jan. 9-16, 5 cases; Königsberg, Jan. 2-9, 1 case.
Great Britain: Bristol, Jan. 9-16, 1 case.
India: Calcutta, Dec. 12-19, 16 deaths.
Indo-China: Saigon, Nov. 28-Dec. 5, 5 cases, 4 deaths.
Italy: General, Jan. 10-17, 13 cases; Naples, 46 cases, 7 deaths.
Java: Batavia, Dec. 12-26, 6 cases.
Mexico: Acapulco, Jan. 10-17, 6 cases; Guadalajara, Jan. 14-21, 2 deaths; Mexico, Dec. 5-12, 5 deaths.
New Foundland: St. Johns, Jan. 23-30, 1 case, imported.
Russia: Batoum, Dec. 1-30, 1 case; Moscow, Dec. 26-Jan. 2, 29 cases, 5 deaths; Riga, Jan. 16-23, 2 cases; St. Petersburg, Dec. 19-26, 8 cases, 3 deaths.
Turkey: Trebizond, Jan. 9-16, present.

YELLOW FEVER

Barbados: Jan. 28-Feb. 4, 11 cases.
Ecuador: Guayaquil, Jan. 2-9, 2 deaths.
Mexico: Maxcanu and vicinity, Jan. 18-23, 4 cases, 2 deaths; Merida, 1 death.

CHOLERA—INSULAR

Philippine Islands: Manila, Dec. 5-19, 3 cases, 1 death; Provinces, 475 cases, 325 deaths.

CHOLERA—FOREIGN

Ceylon: Colombo, Nov. 21-Dec. 5, 3 cases, 5 deaths.
India: Calcutta, Dec. 12-19, 3 deaths; Rangoon, Dec. 19-26, 1 death.

PLAGUE

Ecuador: Guayaquil, Jan. 2-9, 2 deaths.
Egypt: General, Dec. 23-Jan. 14, 22 cases, 12 deaths.
India: Calcutta, Dec. 12-19, 9 deaths; Rangoon, Dec. 19-26, 3 deaths.
Indo-China: Cholen, Jan. 28-Dec. 5, 2 cases, 2 deaths.
Turkey: Bagdad, Dec. 12-Jan. 2, 12 cases, 5 deaths; Jiddah, Feb. 3, present.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

CONNECTICUT HOMEOPATHIC: New Haven, Mar. 9. Sec., Dr. Edwin C. M. Hall, 82 Grand Ave.
CONNECTICUT ECLECTIC: New Haven, Mar. 9. Sec., Dr. T. S. Hodge, Torrington.
CONNECTICUT REGULAR: New Haven, Mar. 9-10. Sec., Dr. Charles A. Tuttle, 196 York St.
MAINE: Portland, Mar. 9-10. Dr. W. J. Maybury, Saco.
MASSACHUSETTS: Boston, Mar. 9-11. Sec., Dr. Edwin B. Harvey, Room 159, State House.

Medical Education and Nostrums, Fifth Letter

The following is the fifth of a series of letters issued jointly by the Council on Medical Education and the Committee on Medical Teaching of the Council on Pharmacy and Chemistry. With it was sent a copy of the pamphlet, "The Broader Aims of the Council on Pharmacy and Chemistry:"

To Medical Teachers:—This letter treats of the remedy against the nostrum evil. Anyone who has given the subject proper thought must be convinced that the nostrum evil can only be combated by employing all our resources to the utmost. It is necessary to strike at the immediate partial manifestations of this evil; but thorough and permanent success can only be won by creating an atmosphere inimical to the whole evil.

This is not a matter which can be done in a day, nor can it be imposed on a single department. It demands the active participation of every one who is seriously interested in our profession. Every one who has the respect of his colleagues and pupils must aid by the force of his example, and by taking occasion to show his attitude toward these questions, insistently and persistently. As every department of medicine has been invaded by the nostrum-maker, so every department offers all too frequent occasions to give the proper advice and warning to the students. Every teacher will know best which of these should be emphasized to his classes. By way of suggestion, merely, we shall point out some of these subjects for each department, in the succeeding leaflets. These subjects can be varied *ad infinitum*, and the Council stands ready to give every assistance in its power to those who desire further information.

Connecticut November Report

Dr. Charles A. Tuttle, secretary of the Medical Examining Board of Connecticut, reports the written examination held at New Haven, Nov. 10-11, 1908. The number of subjects examined in was 11; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 20, of whom 15 passed and 5 failed. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
Yale Medical School...(1905) 89.8; (1906) 80.3;	(1908) 79.6,	82.3
Howard University, Washington	(1908)	83.9
University of Louisville	(1908)	75.6
Johns Hopkins Medical School	(1908)	79.7
Tufts College Medical School	(1908)	75.8
Harvard Medical School	(1908) 75.3, 78.4,	79.1
University and Bellevue Hospital Medical College	(1907)	77
Cornell University Medical College	(1907)	84.8
College of Physicians and Surgeons, New York	(1904)	81.7
University of Vermont	(1891)	75.8
FAILED		
Georgetown University	(1908)	74.3
Baltimore Medical College...(1906) 67.7;	(1908)	74.7
Maryland Medical College	(1908)	71.9
Western Pennsylvania Medical College	(1907)	62.9

New Hampshire December Report

Mr. H. C. Morrison, regent of the New Hampshire State Board of Medical Examiners, reports the written examination held at Concord, Dec. 29-30, 1908. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 22, of whom 15 passed and 7 failed. Three candidates were registered without examination, two under the exemption clause and one through reciprocity. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
Denver and Gross College of Medicine	(1908)	86
Kentucky School of Medicine	(1908)	75
Medical School of Maine...(1906) 78;	(1908)	75
Boston University	(1906)	87
Tufts College Medical School...(1907) 75;	(1908)	75, 76
Woman's Medical College of Penna...(1893) 79;	(1906)	80
University of Pennsylvania	(1908)	78
Jefferson Medical College	(1908)	84
University of Vermont	(1908)	79
Queen's University, Ontario	(1908)	75
FAILED		
Medical School of Maine	(1908)	68
Baltimore Medical College	(1903)	68
Baltimore University	(1903)	63
Tufts College Medical School	(1907)	67
Dartmouth Medical School	(1907)	71
Harvard Medical School	(1907)	72
University of Vermont	(1908)	71

College	Year Grad.	Reciprocity with
LICENSED THROUGH RECIPROCITY		
University of Vermont	(1906)	Vermont
LICENSED UNDER EXEMPTION CLAUSE		
Dartmouth Medical School	(1901)	
Bellevue Hospital Medical College	(1869)	

South Dakota July Report

Dr. H. E. McNutt, secretary of the South Dakota State Board of Medical Examiners, reports the written examination held at Deadwood, July 8 to 10, 1908. The number of subjects examined in was 12; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 35, of whom 32 passed and 3 failed. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED.		
Yale Medical School	(1905)	85.7
Rush Medical College...(1893) 83;	(1906) 83.9,	88
Coll. of Phys. and Surgs., Chicago...(1905) 78.7, 87;	(1906)	81.1
Chicago College of Medicine and Surgery	(1908)	85.4
Northwestern Univ. Medical School...(1907) 79;	(1908)	80.6
Bennett Coll. of Medicine and Surgery	(1906) 75.1,	80.2
Indiana Medical College...(1905) 75, 79.5;	(1907)	88.6
University of Iowa	(1905)	82.4
Sioux City College of Medicine...(1908) 78.4, 78.9,	83.9,	84.4
University of Michigan	(1883)	85.1
University of Minnesota...(1892) 76.7;	(1908)	87.4
Hamline University...(1901) 78.1; (1903) 75.8;	(1908)	83.7
Lincoln Medical College	(1908) 75.2,	80.8
Eclectic Medical Institute, Cincinnati	(1908)	86.6
University of Oregon	(1908)	85
Wisconsin College of Physicians and Surgeons	(1908)	80.4
Trinity Medical College, Toronto	(1903)	79.8
FAILED		
Rush Medical College	(1897)	54
Sioux City College of Medicine	(1906)	67.8
St. Louis College of Physicians and Surgeons	(1906)	69.7

California December Report

Dr. Charles L. Tisdale, secretary of the California Board of Medical Examiners, reports the written examination held at Los Angeles, Dec. 1-3, 1908. The number of subjects examined in was 10; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 62, of whom 34 passed and 28 failed. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
University of Southern California	(1908) 75	78
Cooper Medical College...(1907) 75;	(1908) 78.9	81.1
College of Physicians and Surgeons, San Francisco, (1906) 75.8; (1908) 77.1, 82, 83.3.		
University of California...(1907) 76;	(1908)	76.3
Denver and Gross College of Medicine	(1908)	75
Rush Medical College, (1896) 80.4; (1902) 82.1;	(1907)	76.1; (1908) 86.3, 86.7.
College of Physicians and Surgeons, Chicago	(1898)	76.3
Northwestern University Medical School	(1908)	78.8
University of Kansas	(1898)	83.3
College of Physicians and Surgeons, Baltimore	(1894)	83.2
Harvard Medical School	(1908)	77.3
University of Michigan	(1905)	79.5
University Medical College, Kansas City	(1908)	75.7
Columbia University, College of P. and S., New York, (1898) 78.4; (1908) 78.4.		
Miami Medical College	(1904)	77.9
University of Pennsylvania...(1894) 76.1;	(1906)	81.1
Jefferson Medical College...(1902) 75;	(1906) 78.6,	84.2
University of Texas	(1894)	75.1
University of Lausanne, Switzerland	(1899)	79.5
FAILED		
College of Physicians and Surgeons, San Francisco, (1907) 67.5, 68.3, 68.9, 69.9.		
Cooper Medical College	(1908)	72.5
University of California	(1908)	72.8
University of Southern California, (1903) 45; (1904) 69.9; (1905) 73.3; (1907) 70.4; (1908) 70, 72.8.		
College of Physicians and Surgeons, Los Angeles	(1908)	73.5
Atlanta School of Medicine	(1908)	16.9
Medical College of Indiana	(1898)	44.4
University of Iowa...(1885) 70.1;	(1892)	66.3
Louisville Medical College	(1897)	67.1
University of Louisville	(1893)	68.4
Baltimore Medical College	(1907)	63.6
University of Michigan	(1898)	62.3
St. Louis College of Physicians and Surgeons	(1908)	65.5
Washington University, St. Louis	(1907)	71.1
Omaha Medical College	(1902)	69.5
New York University Medical College	(1893)	72.8
Miami Medical College	(1903)	62.2
Jefferson Medical College	(1894)	57.3
University of Vermont	(1907)	66.5

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Unqualified Practitioners in England

In the discussion of medical practice acts in the various states, frequent mention has been made of the apparently constant desire for change and modification of such laws, and also the tendency of one state to endeavor to adopt a provision or policy which another state is making an equally strenuous effort to discard. Evidently, this tendency is not limited to states, but is equally true of nations. An editorial in the London *Lancet*, January 23, is particularly interesting in this connection, since it shows that the British medical practice act, based on the definitive principle, is no more satisfactory than is our system of state legislation, based on the restrictive principle. After pointing out the difficulty of arousing the public to a realization of the dangers of unqualified practice, as well as the obstacles encountered in securing a change or reconsideration of any long-established regulation, the editorial continues:

> The concrete examples furnished by foreign states and modern colonies are likely to prove more convincing as to the question of practicability than abstract reasoning or speculation which are liable to be confronted by the suggestion of imagined difficulties. . . . A work of great practical value is the report and appendices recently issued by the Unqualified Practice Prevention Committee of the General Medical Council, containing a digest of the laws in force in the British Empire and in foreign countries which prevent or do not prevent medical practice by other than legally qualified persons. Through the valued cooperation of the lord president of the council, the cooperation of the foreign, India and colonial offices was secured by the committee so that the answers to its questions obtained by the committee are authoritative and cover all foreign countries and British colonies of importance with the exception of the United States and Canada. With regard to these, Dr. A. G. Bateman has drawn up tabular statements based on the medical practice acts of the various states and on the provincial acts of the dominion. . . . Two questions have been put, namely: (1) What constitutes a legal qualification for the practice of medicine and surgery? (2) What legal provisions exist for the prevention of the practice of medicine and surgery by persons not legally qualified?
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> The information given in reply has been digested and tabulated. . . . Out of 107 colonies and countries, 75 forbid altogether the practice of medicine by those not legally recognized as qualified

persons and provide penalties of fine or imprisonment or both for transgressions. Six others may fairly be added to these as being under laws tending in the same direction, although not so definite in the restrictions imposed (making 81 countries in all having restrictive legislation). Twelve countries and colonies have no laws regulating medical practice, but this is not surprising when we consider the nature of their populations. They are India, Wei-Hai-Wei, the British East African Protectorate, St. Helena, the Somaliland Protectorate, Uganda, Zanzibar, the Cayman Islands, China, Persia, Abyssinia and Morocco. In Peru, unqualified practice does not appear to be penalized, and on the Gold Coast and in Russia the restrictions which exist only prevent the unqualified from procuring potent drugs. This leaves ten to share with ourselves (Great Britain) the peculiar position, for it must be observed that it is peculiar, of merely reserving to qualified practitioners official recognition and the privileges which naturally arise from it, including the use of medical titles and of providing penalties for persons making use of such titles when not possessed of them. The list of those last referred to is an interesting one, because it contains important British colonies and one very important European state. It is composed of New South Wales, Queensland, South Australia, Victoria, New Zealand, Sierra Leone, Barbados, St. Vincent, the Falkland Islands, Germany and the United Kingdom.

From this it will be seen that not only are we members of a small minority in the world, but that in Europe we share our position with the German Empire alone and that consequently we have ample opportunities of studying laws passed by European governments with a view to safeguarding effectually the patient and especially the ignorant patient.

A summary of the laws of the various European governments follows, showing that in France, Austria, Belgium, Hungary, Greece, Italy, The Netherlands, Portugal and Japan the practice of medicine is forbidden under a penalty of fine and imprisonment for anyone except a properly qualified person who, in most of these countries, must be a graduate of the state university as well as licentiate of the state. The editorial concludes with the resolutions adopted by the General Medical Council, asking for the appointment of a royal commission by parliament to inquire into the evil effects produced by the unrestricted practice of medicine and surgery by unqualified persons, which the *Lancet* hopes may be the first step toward the legislative remedy of a great public evil.

This agitation in Great Britain is particularly interesting to those in this country who recently have been considering medical practice legislation with a view to obtaining, if possible, uniformity in state legislation. The medical practice acts of practically all our states are based on the restrictive principle. Unfortunately, in but few of them is there any adequate enforcement of the law, owing to the lack of appreciation on the part of the public of the dangers to life and health of such unqualified practice and of a constant failure on the part of public opinion to support the enforcement of the law by prosecutions brought under it. Evidently, the problem in Great Britain is an equally serious one, since the *Lancet* says: "With us the most ignorant quack can treat disease or injury with impunity, and the worst he can fear if he strengthens his claim to attention by usurping medical titles is a fine of not more than twenty pounds, or half the minimum penalty which would earn for him across the channel." In other words, in Great Britain the charlatan and fakir is punished, not because he attempts to treat a patient without adequate knowledge of disease, but because he claims to be a legally qualified practitioner when he is not. So long as he does not make this claim and so long as his patients (or dupes) accept his services knowing him to be unqualified, no legal obstacle can be put in his way in Great Britain. The *Lancet* recognizes the necessity of public education, since laws passed either by Parliament in Great Britain or by state legislatures in the United States which do not have the support of public opinion are practically useless. The value of the royal commission called for by the resolutions of the General Medical Council is evident. Unfortunately, we have no provisions in our form of government for inaugurating a general inquiry of national scope, by which a question lying within the jurisdiction of the states may be investigated. We must, therefore, look for public education along this line, either from the concerted action of all the states, which practical experience has shown to be impossible, or from the unselfish and voluntary activities of some non-political organization of national scope. The possibilities of such public education are shown by the results secured in recent years in pure food legislation. Sporadic and occasional cases of quackery and imposition will probably always occur, but the people will be as quick to see the dangers from systematic and widespread deception as they have been to safeguard against impure and adulterated foods. In the meantime, the establishment and work of the Royal Commission on Unqualified Practice in Great Britain will be watched with great interest in this country, since charlatanism and its methods are about the same on either side of the Atlantic.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Seventh Month—Third Weekly Meeting

DYSTOCIA

Due to Pathologic Forces

1. EXCESSIVE UTERINE CONTRACTIONS.—Intensity, duration (tetanic), frequency, time of onset. Causes: (a) increased irritability of uterus; (b) premature rupture of membranes; (c) obstructions, contracted pelvis, abnormal presentation, etc.; (d) operative interference; (e) ergot. Results: Increased pain, precipitate labor, rupture of uterus, asphyxia of child.
2. WEAK UTERINE CONTRACTIONS.—Inertia or atony. Intensity, duration, frequency, onset. Causes: (a) congenital weakness of uterine muscle; (b) acquired weakness from constitutional diseases, etc.; (c) fibroids; (d) metritis; (e) distention of uterus, twins, hydramnios, etc.; (f) pelvis, tough cervix or perineum. Results: Exhaustion, infection, danger to child.
3. PATHOLOGIC ABDOMINAL CONTRACTIONS.—Inefficient from pain or fear. Treatment.

Due to Pathology of Generative Tract

VULVA: Atresia from injury, etc., hymen, edema, thrombus or hematoma.

VAGINA: Congenital or acquired atresia, stenosis, neoplasms, resistant perineum, spasm of levator ani.

CERVIX: Conglutination, cicatricial stenosis, rigidity, edema, neoplasms, cancer, etc., displacement of os.

UTERUS: Fibromyoma, above cervix, in cervix; displacements, operations, fixations and suspension, to relieve retroflexion.

OTHER CAUSES: Ovarian tumors, enlarged spleen or kidney, tumor or distention of bladder or rectum.

Due to Deformed or Contracted Pelvis

DEFINITION.

DIAGNOSIS.—Pelvimetry, type of pelvimeter. External pelvimetry; iliac spines, iliac crests, trochanters, external conjugate of Baudelocque's, value of each. Internal pelvimetry; diagonal conjugate. Diameters of outlet; tubera ischii, pubic arch.

CLASSIFICATION.—1. By shape, generally contracted, flat, obliquely, transversely, irregularly contracted, funnel shaped. 2. Bayer's. (a) Primary, antenatal or postnatal developmental disturbances: split, assimilation, Naegele, Robert, dwarf, infantile, generally contracted, flat, irregularly contracted, funnel. (b) Secondary. (1) To pelvic disturbances, rickets, osteomalacia, osteitis, trauma, tumors. (2) To anomalies in other parts of skeleton, scoliosis, kyphosis, lordosis, kyphoscoliosis, spondylolisthesis, defects of lower extremities, congenital hip dislocation.

PROGNOSIS.—Danger to the mother, child, with specified diameters. Indications for spontaneous labor, forceps, version, premature labor, craniotomy, pubiotomy, Cesarean section.

Due to Pathology of Fetus

1. Excessive development. 2. Malformations, double monsters. 3. Deformities, acardiacus, anencephalus. 4. Hydrocephalus, diagnosis, treatment. 5. Abdominal enlargement, ascites, distended bladder, tumors of kidney and liver. 6. Abnormal presentations, (a) transverse, shoulder, acromion; (b) compound. 7. Multiple pregnancy, simultaneous engagement. 8. Prolapse of cord, causes, treatment; short cord, treatment

Society Proceedings

COMING MEETING

Medical Society of the Missouri Valley, St. Joseph, Mar. 18-19.

MEDICAL SOCIETY OF THE STATE OF NEW YORK

One Hundred and Third Annual Meeting, held at Albany, Jan. 26-27, 1909

(Concluded from page 581)

Etiology and Pathology of Suppurative Otitis Media

DR. J. E. SHEPPARD, Brooklyn: The immediate and exciting causes of purulent otitis media are the various forms of pyogenic bacteria. Catarrhal inflammations of the nose and nasal pharynx due to colds, influenza, exanthemata, etc., direct irritation due to operative interference, forcible inflation and the nasal douche are also responsible for this condition. The predisposing causes are obstructive affections of the nose and throat, as hypertrophies and adenoids, exposure to cold and lowered resistance of the tissue cells. The pathologic phenomena are injection of blood vessels, swelling of the mucosa, exudation, serous, mucous, purulent, erosion and ulceration, with necrosis of thin membranes; rupture of the membrana tympani; bone necrosis in various directions. This sequence can be applied to some of the exanthemata.

Non-Operative Treatment in Suppurative Otitis Media

DR. EDMUND PRICE FOWLER, New York City: Owing to the importance of home treatment, the patient, as he is out of sight of the surgeon for 98 per cent. of the time, should be instructed and provided with the means of carrying out orders. The dangers from neglect or from faulty treatment or care are numerous. The object of treatment is not only the abortion, shortening and cure of the disease, but also the prevention of complications, preservation of function and the patient's general health which is liable to suffer from long-continued suppurations. An adequate reaction of inflammation can be promoted by such means as increasing the hyperemia, leucocytosis, phagocytosis, opsonins, etc., by heat, counterirritation, constriction neck bands, suction cupping, irrigations, dry treatment, antiseptics, hydrolytics, caustics and blood letting. All these have their disadvantages as well as their advantages, and the best method consists in combining all, except the caustic treatment and neck band. Such a method he employs in his suction bell ear douche, with suitable solutions and temperature. All the advantages of the dry and wet treatment are combined and the disadvantages removed by irrigating in the presence of a vacuum, and the tendency to premature closure of the incision in the drum membrane and to adhesions is largely eliminated by this method, which also recommends itself by its simplicity, cleanliness, safety and efficiency.

Indications for and Results of Operative Treatment, Including the Simple and Radical Mastoid Operations

DR. WENDELL C. PHILLIPS, New York: Bulging of the drum membrane, intense pain and fever, constitute a syndrome of sufficient import to warrant paracentesis of the drum membrane. It is a safe rule to open the drum membrane as soon as the diagnosis of purulent tympanitis becomes positive. A clean-cut incision with a long slender-handled, small-bladed scalpel, with the patient under nitrous oxid anesthesia, immediately relieves pressure, establishes drainage and healing takes place with but little damage and no scar tissue. The patient should remain in bed until all acute symptoms have subsided. The most important operation in intratympanic operations is the removal of polyps or granulation tissue, the most common symptom of which is otorrhea. A simple method of removing large polyps is by the use of a small aural snare. Ossiculectomy is employed as a means of curing chronic purulent otitis media by the removal of diseased tissue and the promotion of drainage. The intratympanic operation is indicated, (1) when a purulent inflammatory process in the middle ear does not respond to treatment and when the diseased process is chiefly confined to the drum membrane, ossicles and tympanic walls; (2) after recurrence of polypoid proliferation unless such proliferation was associated with extensive necrosis of the aditus, mastoid antrum or labyrinth; (3) as a preliminary to the radical operation. The simple mastoid operation is indicated whenever a purulent inflammatory process has invaded the mastoid antrum and mastoid cells. The indications are as follows: (1) Pain over the mastoid region; (2) tenderness over the mastoid cortex; (3) drooping of the posterior superior canal wall, and bulging of the drum membrane which does not diminish as a result of paracentesis; (4) fever; (5) discharge; (6) subperiosteal postauricular swelling, with or without superficial abscess; (7) the presence of symptoms of intracranial complications of purulent labyrinthitis; (8) the advent of facial paralysis; (9) blood examinations in conjunction with other symptoms of mastoiditis are of great diagnostic value. Indications that call for immediate operation, whatever the concomitant symptoms may be are, (a) an acute mastoiditis, occurring in an ear which is the seat of chronic purulent otorrhea; (b) symptoms of labyrinthitis; (c) facial paralysis; (d) symptoms of intracranial involvement. The results of the simple mastoid operation are relief of pain, the cure of the destructive purulent process, the preservation of the function of hearing, the lessened tendency to serious intracranial and labyrinthine complications, the lessened possibilities of recurrence. The radical mastoid operation is performed for the cure of chronic purulent otitis media, by which is meant a number of pathologic conditions all having the common symptom, otorrhea. The purpose of the radical mastoid operation is to convert the external auditory canal tympanic cavity, the attic, aditus ad antrum, mastoid antrum and mastoid cells when diseased into one wide-open cavity, with the hope that the ramifications of the disease will be terminated. The radical operation is indicated (1) when a permanent cessation of the purulent process has not been effected by prolonged intratympanic treatment; (2) when a cure has not been effected by the removal of necrosed ossicles and curettage of the middle ear; (3) when a sudden cessation of the pus discaarge produces chills, fever, vertigo, pain or other unusual symptoms; (4) when symptoms of mastoiditis supervened in chronic purulent otitis media; (5) facial paralysis occurring during the course of chronic purulent otitis media; (6) attacks of vertigo; (7) in all cases of complicating intracranial or lateral sinus involvement; (8) when there are positive evidences of cholesteatoma in the mastoid antrum; (9) when there are fistulous openings in the cortex of the mastoid process or in the osseous canal; (10) whenever depression or other symptoms of disturbed mentality accompany the disease. The operation is contraindicated (1) when the purulent process is tuberculous and accompanied by advanced general tuberculosis; (2) in advanced pernicious anemia or albuminuria and in cachectic diabetes; (3) usually in young children; (4) in cases in which the disease is confined to the ossicles without odor with improper opening in the drum membrane; (6) in all cases in which it is possible to effect a cure by other methods.

The Problem of Efficient Nursing of Persons of Moderate Income

DR. WILLIAM O. STILLMAN, Albany: I deal with this subject from the standpoint of a practical experiment in educating domestic nurses for their duties by a six months' course of instruction in classes and at the bedside. About one hundred lectures, given by from eighteen to twenty physicians and trained nurses, supply the didactic part of this course. Quizzes are given on each lecture. The skeleton manikins, microscope, etc., are used. Careful diet-kitchen instruction is given in methods of preparing food for the sick. Practical nursing, under the supervision of the head nurse, is given toward the end of the course.

A Case of Scleroderma

DRS. SAMUEL B. WARD and ERASTUS CORNING, Albany: The first symptom that the patient noticed was a feeling of numbness in the right wrist, in May, 1908. Stiffness and swelling of the right hand followed, then of the left hand, next of both forearms and both feet and legs up to the knees. This was accompanied with edema. The case is now in the

atrophic stage and apparently stationary. A variation in the leucocytosis has been observed from 11,000 to 22,000, with 35.4 per cent. eosinophiles in the first differential count.

Relative Aortic Incompetency of Muscular Origin

DR. J. M. ANDERS, Philadelphia: The present discussion includes only cases that are of muscular or neurotic origin. These may be divided into three well-defined groups: (a) Cases of muscular and nervous origin that supervene in the course of fibrous myocarditis and other less serious conditions of the myocardium, independently of valvulitis or advanced changes in the aorta; (b) cases secondary to chronic valvulitis affecting the mitral segments with failure of the left ventricle; (c) cases occurring in the course of or following acute infective diseases due to the action of the specific toxins on the myocardium. The disappearance of the murmur may coincide with periods of absolute rest; increased activity of the circulation, the result of mental excitement or physical exertion tends to reproduce the murmur. These views are extensively supported by clinical and postmortem observations and are also corroborated by the experiments of Thayer and MacCallum. Four cases are illustrative: The first was one in which dilatation of the left ventricle without much associated hypertrophy led to relative aortic incompetency. In this case appropriate treatment caused a return to normal heart sounds and normal dimensions of the heart. In two cases, failure of the left ventricle followed mitral incompetency. In instances in which the necropsy shows both left ventricle dilatation and morbid changes with more or less dilatation of the root of the aorta, not uncommonly observed, the condition of the left ventricle shares in the production of the relative aortic incompetency. Dilatation of the left ventricle when present should be taken into account in any effort to decide the cause of aortic diastolic murmurs, more especially when such dilatation is associated with other causative lesions. The murmur of relative incompetency may disappear during asystole of the left ventricle. It is to be recollected that an organic aortic diastolic murmur may absent itself either temporarily or permanently.

Nature of Foot and Mouth Disease

VERANUS A. MOORE, Ithaca: This disease first appeared in 1870, after a shipment of cattle from England to Canada. The animals lost flesh and the debilitated condition in which they were left required several months for restoration. There are serious sequelæ, such as abscesses, sloughing of the hoofs and septicemia. There is slight mortality, only from 2 to 5 per cent. The symptoms and lesions appear with such regularity that four stages can be defined: (1) Dulness and rise of temperature; (2) the appearance of vesicles; (3) erosion; (4) healing. As yet no practical way of immunizing cattle against the disease has been discovered. As the disease recently manifested itself in Pennsylvania and New York, it was an acute infectious and highly contagious disease, affecting both large and small animals. Fresh, pure lymph introduced into the veins of susceptible cattle in quantities as small as 0.005 c.c., would produce the disease. One attack gives immunity but of short duration. Vesicles appear on and about the mouth, udders and feet and the membranes covering them. These membranes are thin and soon break and the epithelial layer is left attached at the borders. The lesions in the human subject appear to have the same localization.

Lessons from Physiology and Treatment of Cardiovascular Diseases

DR. W. H. GIBSON, Utica: In general practice one notes an apparent increase of cardiovascular disease, and the study of vital statistics shows that this increase is actual. After degenerative changes have taken place, therapeutic measures are practically useless. The study of the cardiovascular mechanism suggests the value of preventive measures. Arterial changes may be considered under four heads: Chronic intoxication, as from alcohol, tobacco, coal-tar preparations, etc., improper diet and overeating, excessive muscular work, the strain and stress of modern life. If it were more generally known that there were 23,000 deaths from cardiovascular diseases, while during the same time there were but 17,000 deaths from tuberculosis in New York State, more interest would be taken in these diseases.

Baths and Exercise in the Treatment of Heart Disease

DR. LOUIS FAUGERES BISHOP, New York: The benefits derived from exercise and baths in the treatment of heart disease are essentially due to correction of abnormal tension in the blood vessels and heart muscle. In valvular disease when compensation fails, there is found a loss of tonicity in the heart muscle leading to dilatation, and a hypertonicity in the blood vessels leading to contraction. The same condition may be found when toxic substances impair the strength of the heart muscles. The Nauheim-Schott treatment is applicable to all cases in which there is a disturbance of the balance of tonicity between one part of the vascular system and another. When the cause of the disease is active it must first be discovered and removed. The cause of broken compensation may be toxic or nervous or may have arisen from physical strain. In any case, it is necessary to restore the tone of the heart muscle and to relieve the overtone of the blood vessels. The patient will often be found to have been overloading the system with food, to have neglected systematic exercise, or to have been subjected to nervous or physical strain. The symptoms of broken compensation in a valvular case are shortness of breath, swelling of the feet and congestion and tenderness of the liver. A trip to Europe often removes the cause of the trouble before the patient comes to treatment. The Nauheim baths correct abnormal vascular tone, and relieve the heart of the back strain of contracted blood vessels and promote the restoration of the heart muscle. The resistance exercises in a greater measure than the baths correct abnormal vascular tone and also increase the tone of the heart muscle. The Nauheim-Schott treatment has many elements, all of which are essential to the complete system. Some patients would improve by the mere change of environment, but it is likewise true that some improve by the baths and exercise alone. This treatment can be carried out perfectly well in America by any one who grasps the essential principles. To regulate the life and produce the proper home surroundings for the patient requires an amount of authority, energy and persistence that few physicians can bring to bear in the course of routine medical practice. Hence the necessity of specialists. I have had patients from other parts of America come to New York for a course of Nauheim treatment, which was conducted at a convenient hotel or hospital, who experienced just as much benefit as they did in going to Nauheim, and with no more labor on the part of the physician than is necessary for the Nauheim physicians. Baths and exercise have a large place in the treatment of cardiovascular disease, but they are not specific remedies, and must be part of an intelligent general plan.

Therapeutic Value of Blood Transfusion

DR. W. F. CAMPBELL, Brooklyn: The object of this operation is to form an anastomosis between individuals. In the selection of the donor, three points should be considered, namely, a preference for the nearest blood relation, a young and vigorous adult, and a thin subject. I employ the method of Crile with few modifications. Transfusion increases the coagulability of the blood, as well as the oxygen-carrying powers. In many instances the transfusion of blood has appeared to be of great value, as the reported cases show. There is no doubt as to the general increase in the numerical elements of the blood as the result of transfusion. The output of urea is also increased. It is hoped that heterogenous blood may become available. My experience indicates that blood is the only material and the best to meet all the indications for transfusion.

DISCUSSION

DR. A. T BRISTOW, Brooklyn: I had a case which demonstrated that blood transfusion was better than the transfusion of saline solution. This patient received three pints of saline solution without good results; life was saved by direct blood transfusion.

DR. ALEXANDER LAMBERT, New York: In the case of a four-days-old baby, who was almost exsanguinated from hemor-

rhage and who was operated on by Dr. Carrel and Dr. Brewer, the radial artery of the father was connected to the popliteal vein of the baby. Improvement was so marked and immediate as to be quite dramatic.

Congenital Abnormalities of Cervical or Spinal Origin

DR. NATHAN JACOBSON, Syracuse: Three conditions are considered. First: Branchial cysts in unusual positions. These may be illustrated by two cases, one situated beneath the sternocleidomastoid muscle and easily removed through an incision parallel with the posterior border of this muscle; the second, a sublingual cyst. The former manifested itself on the twenty-first day of life; the second was present at birth. Congenital conditions may not develop enough to become annoying until adult life. Congenital ranula is not due to obstruction of Wharton's duct, but is dependent on either a pathologic change in the sublingual gland, or, what is more frequent than is generally recognized, it may be of branchial origin, springing from the thyreoglossal tract. Second: Thyroid tumors entirely removed and disconnected from the normal thyroid gland. Only 17 cases of aberrant thyroid tumors are known to be recorded in medical literature, and in none had a diagnosis been made prior to operation. Third: Spina bifida, which presented urgent manifestations at birth. A case of spinal meningocele with necroses of the sac on which I operated when the child was but 2 days old yielded a perfect result, and twenty months later the child was in excellent health despite its congenital abnormality.

Points in the Diagnosis and Operative Treatment of Simple Fractures

DR. LEWIS A. STIMSON, New York: The recognition of a complete fracture of a long bone is usually easy. In fractures of the small bones and of the spongy ends of long bones, and in one of two parallel and associated bones, and even in fracture of the shaft of a long bone without displacement, the usual signs of mobility and crepitus are frequently unobtainable. The search for pain on local pressure is best made with the tip of the finger or the rubber end of a lead pencil. In Colles' fracture a well-defined line of sensitiveness can be traced along the radial side and across the dorsum of the forearm just above the wrist; in fracture at the base of the neck of the femur, pain is found on pressure behind or in front just inside the great trochanter; in fracture of the surgical neck of the humerus, by pressure in front or on the outer side; in fracture of the external condyle of the humerus, by pressure on the supracondylar ridge a little above the epicondyle; in fracture of the shaft of a long bone, by pressure at the corresponding point on the most accessible side. It is necessary to support the limb so that pressure does not move the fragments. Do not mistake the sensitiveness of a bruise for that of a fracture. Pressure against the ends of a bone in the direction of its long axis causes pain when the bone is completely broken. In fracture of the ulna, the radius being unbroken, pain is caused by the extension of the elbow with pressure against a fixed object. The reasons given in favor of the general adoption of open operation in simple fractures of the shaft of a long bone are that it assures an accurate adjustment of the fragments and its maintenance by suture, and that failure of union and the drawbacks incident to the frequent permanent displacement left by other methods are avoided. Accurate adjustment of the fragments is of no great value unless it can be maintained and its maintenance by suture or other direct fixation is uncertain. If the grip of the suture is not slack it will surely break. The value of an adjustment appears to consist mainly in the removal of interposed soft parts or small fragments, which, if not removed, delay or prevent reunion or cause persistent deformity. The removal of possible obstacles to reunion is an argument in favor of operation. Repair is slower after an operation in which the fragments have been temporarily still farther displaced, as has to be done for the placing of a suture. The manipulation necessary in drilling and suturing the fragments delayed union, probably by additional injury to the periosteum. The importance of the advantages of early operation are not great; the irregularities of outline, in the great majority of properly treated cases, are functionally and cosmetically unimportant; failure of union is not only rare, but in the majority of cases in which it occurs is due to general causes, and in only a small minority to local causes which operation could remove. For the adjustment, the surgeon must depend on the usual dressings whose inadequacy is given as a reason for operating, or he must use the untrustworthy suture or other mechanical means, all of which involve the risk of suppuration and delay of failure of union. The function of the neighboring point may be diminished or lost through the implication of its muscles in the operation. Applying the standards of promptness, safety and efficiency, the operation is less prompt in its results, less safe and more efficient in only a small number of cases, and should be reserved for those cases in which its needs are clearly evident.

Fractures of the Neck of the Femur

DR. ROYAL WHITMAN, New York: This paper is on a technical treatment of fracture of the neck of the femur designed to restore function, and was limited to a class of cases in which effective local treatment may be applied. This class is larger than is indicated by statistics. The abduction method is designed to apply surgical principles to the treatment of this fracture. The disregard of these principles explains the present low standard of success in treatment of these cases. The deformity should be corrected under anesthesia, by rotation and traction if the fragments are separated; by traction, downward pressure, on the trochanter and by the leverage of gentle abduction if the fracture be incomplete. The limb should be placed in full abduction and fixed by a long spica plaster bandage. The advantages of abduction in the treatment of complete fracture after shortening has been overcome by traction are (a) that it makes the capsule tense and thus aligns the displaced fragments; (b) that it directs the surface of the outer fragment toward that of the inner; (c) that it relaxes the muscles whose contraction caused distortion; (d) that it apposes the trochanter to the side of the pelvis and thus checks upward displacement. By fixing the neck one is enabled by further abduction, aided by traction and pressure, to adjust the shaft in its normal relations, and thus to correct a deformity without violence or danger of displacement. During repair fixation in abduction and extension prevent the contraction which induced flexion and adduction. Repair in these fractures is slow, and can hardly be completed within a year; thus prolonged after-treatment is essential to restoration of function.

Radical Conservatism in the Treatment of Compound Fractures

DR. MARTIN B. TINKER, Ithaca: The first essential in the treatment of compound fracture is the successful management of the lacerated and contused wound. The usual methods of treatment are uncertain and illogical. During scrubbing, infectious material is often scrubbed into the wound rather than removed, injured tissues are still further damaged by scrubbing and irrigation with antiseptic solutions and are left to slough. I suggest two methods of dealing with such cases: First, in the less severe injuries the wound should be packed with oil tampons while the surrounding skin is scrubbed, and later swabbing with some strong, certain disinfectant, followed by excision of damaged tissue and closure as in an incised wound. Second, in severe crushes where tissues are pulpified and it is certain that considerable areas will become necrotic, the wound is covered with oiled compresses, the surrounding skin is disinfected, the wound swabbed with powerful germicide and dressings are applied until line of demarcation forms. More of the injured part always lives than is expected, and later operation saves all that will prove useful. Local anesthesia and nerve blocking are useful to minimize shock. An immunizing dose of tetanus antitoxin should be given in doubtful cases. Blood-vessel anastomosis, bone-grafting and transplantation, skin-grafting, nerve and tendon suture should be employed in a wider range of cases than now usually employed. At present there is a tendency to neglect common surgical diseases and injuries in favor of the surgery of stomach, pancreas, brain, heart and other work. Hospital surgeons turn over fractures to internes

without giving personal attention or even instructions. If results are to be improved, our best trained men must give some of their best efforts to compound fractures.

Some of the Problems of Prostatectomy

DR. L. BOLTON BANGS, New York: It is necessary that a more careful discrimination should be exercised in the patients to be operated on. Careful preliminary treatment should always be given. Fistulas are often very troublesome after perineal operations and injections of a solution of iodin with a long and suitable sinus syringe give good results. The possibility of the formation of postoperative stone should be taken into consideration and means for its prevention should be adopted.

Epilepsy

DR. W. H. KIDDER, Oswego: The uniformity of all writers on the symptomatology and diagnosis of epilepsy is striking. In considering the possible causes of epilepsy one should give attention to the peripheral irritation which might cause an outbreak of a "latent" attack of epilepsy. Certain foods should be selected for epileptics, especially in childhood. They should never indulge in alcoholic beverages. They should be instructed in the art of self control. There should be purposeful endeavors toward guiding the mental tendencies.

The First Interview with the Patient

DR. WILLIAM S. ELY, Rochester: The first examination of a patient is often inadequate and leads to erroneous diagnosis. There should be a search for the causes of disturbances that often receive only symptomatic treatment. There should be a correct estimate of nutritive changes. The scales are as important in the physician's office as the microscope. Both moral and physical disturbances are often due to hereditary influences. The psychical aspects of various disorders are largely neglected. This accounts for the existence of Christian science and similar cults and is a reflection on the medical profession.

Other Papers Read

The following papers were also read:

"Observations Based on One Hundred Cases of Prostatectomy," by Dr. J. Bentley Squier, New York; "X-Ray Treatment of Leukemia," by Dr. W. L. Schuyler, Utica; "Review of the Application of Roentgen Rays in Diagnosis," by Dr. E. W. Caldwell, New York; "Treatment of Meningeal (?) Sinus and Labyrinthine Complications," by Dr. S. MacCuen Smith, Philadelphia; "Relation of Ocular and Cardiovascular Disease," by Dr. Arthur J. Bedell, Albany; "Acute Anemia," by Dr. G. W. Crile, Cleveland, Ohio; "Remote Results Following Excision of the Shoulder Joint for Trauma and Disease," by Dr Charles L. Scudder, Boston; "Volkmann's Ischemic Paralysis," by Dr. R. H. Sayre, New York; "A Case of Leukemia with Unusual Blood Findings," by Dr. H. G. Webster, Brooklyn; "New Elastic Operations for Cicatricial Palatopharyngeal Contractures and Adhesions," by Dr. John O. Roe, Rochester; "The Modern Hippocrates," by Dr. A. Jacobi, New York; "The Exercise of Descending in the Treatment of Disease," by Dr. Heinrich Stern, New York; "Basal Fractures Treated by Subtemporal Decompression," by Dr. Harvey Cushing, Baltimore.

Marriages

JAMES J. MCKONE, M.D., to Miss Nellie Hickey, both of Tacoma, February 3.

ALFRED STENGEL, M.D., to Miss Martha O. Pepper, both of Philadelphia, February 4.

PAUL W. GIBSON, M.D., Hartington, Neb., to Miss Mildred of Greenville, Ohio, January 28.

EDWARD J. KIRWAN, M.D., to Miss Nora Adelaide Genia, both of Ludington, Mich., recently.

EDWARD JOHN MURPHY, M.D., to Miss Marie Loretta Drew, both of Brooklyn, N. Y., January 26.

ALBERT WILLIAM BRADFORD, M.D., Sparland, Ill., to Miss E. Nicholson of Aurora, Ill., January 13.

WEBB J. KELLY, M.D., Piqua, Ohio, to Miss Viola Coppess Lucy Smith of La Prairie, Ill., February 4.

PRESLEY B. OGDEN, M.D., Fairmont, W. Va., to Miss Alice Sapp of near Shinnston, W. Va., February 3.

WILLIAM C. PORTER, M.D., Poughkeepsie, N. Y., to Miss Ethel Losee King of Catskill, N. Y., January 31.

JOSEPH CHANDLER MARSHALL, M.D., Chester, Pa., to Miss Annette Rowan of Liscard, Cheshire, England, at Echo Point, W. Va., January 27.

Deaths

William Buckingham Armstrong, M.D. College of Physicians and Surgeons, New York City, 1899; a member of the American Medical Association; vice-president of the Georgia Medical Association; a member of the Atlanta board of health; visiting surgeon at the Grady, Wesley Memorial and Presbyterian hospitals; associate professor of anatomy in the Atlanta College of Physicians and Surgeons; formerly president of the Grant Park commission; died at his home in Atlanta, February 2, from pneumonia, aged 35. At his funeral the active pallbearers were members of the medical profession of Atlanta and the honorary escort was made up of members of the Atlanta Pathological Society, Chi Phi Fraternity, faculty of the Atlanta College of Physicians and members of the staffs of the hospitals with which Dr. Armstrong was connected.

Gurdon Wadsworth Russell, M.D. Yale Medical School, New Haven, Conn., 1837; vice-president of the American Medical Association in 1878; president of the Connecticut State Medical Society in 1871; for fifty years a member of the staff of the Hartford Hospital, and for many years its president; president of the Hartford Retreat; one of the organizers of the Hartford Medical Society, which in 1887 gave him a loving cup in recognition of his completion of half a century in the practice of medicine; medical director of the Aetna Life Insurance Company for nearly sixty years; the oldest alumnus of Trinity College, Hartford; a member of the Park board for twenty-five years; died at his home February 3, from senile debility, aged 93.

Andrew Easton, M.D. Bellevue Hospital Medical College, New York City, 1871; of Allegheny, Pa.; a member of the Medical Society of the State of Pennsylvania; for three terms a member and for several years chairman of the Fourth ward school board of Allegheny, and for two terms a member of the city council; died suddenly February 2, from cerebral hemorrhage, at his winter home at Miami, Fla., aged 63.

Isaac E. G. Naylor (years of practice, Ind.), a practitioner of Indiana since 1843, and for more than fifty years in Darlington; assistant surgeon in Colonel Rice's regiment raised at Lafayette to operate against Morgan during the Civil War; died at the home of his daughter in Crawfordsville, January 22, from the effects of a fall a week before, aged 89.

Charles Edward Hoye, M.D. New York University, New York City, 1890; of Seattle; a member of the Washington State Medical Association; for two terms coroner of King county, and thereafter surgeon of the North Pacific Hospital at Ravensdale until a year ago; died in the Providence Hospital, Seattle, January 24, from nephritis, aged 42.

Miles E. Van Meter, M.D. St. Joseph (Mo.) Hospital Medical College, 1879; California Medical College, San Francisco, 1886; professor of orthopedic and clinical surgery in the latter institution; formerly a member of the San Francisco board of health; surgeon to the Southern Pacific Railway; died at his home in San Francisco, January 29, aged 56.

Perry C. Clayberg, M.D. Eclectic Medical Institute, Cincinnati, 1875; Chaddock School of Medicine, Quincy, Ill., 1885; formerly dean and professor of practice and principles of medicine in the American Medical College, St. Louis; a veteran of the Civil War; died at the home of his daughter in St. Louis, February 1, from disease of the brain, aged 61.

Joseph Bernhard Mauch, M.D. College of Physicians and Surgeons of the City of New York, 1886; a member of the Medical Society of the State of New York; clerk to Captain Hall on the *Polaris* Polar expedition from 1871 to 1873, and the last survivor of that expedition; died at his home in New York City, February 2, from cerebral hemorrhage, aged 59.

James H. Hanna, M.D. Memphis (Tenn.) Hospital Medical College, 1886; a member of the American Medical Association and Tri-State Medical Society of Tennessee, Mississippi and Arkansas; formerly president of the Tipton County Medical Society; died at his home in Covington, January 29, aged 49.

Moses Jones, M.D. Kentucky School of Medicine, Louisville, 1899; Starling Medical College, Columbus, Ohio, 1895; of Oak Hill, Ohio; a member of the Ohio State Medical Association; died at the home of his sister in South Wellston, Ohio, February 2, from tuberculosis, aged 36.

Benno Bribach, M.D. Missouri Medical College, St. Louis, 1880; of Carondelet, St. Louis; a member of the American Medical Association; died at St. Luke's Hospital, St. Louis, January 29, after an operation for disease of the spine, aged 62.

Thomas W. Prather, M.D. Meharry Medical College, Nashville, Tenn., 1903; a member of the executive board of the Red Cross Sanitarium, Louisville; died at his home in that city, from valvular heart disease, January 26, aged 40.

Lambert Watson, M.D. University of the Victoria College, Cobourg, Ont., 1888; for several years a practitioner of Chesaning, Mich.; died at his home in Burton, B. C., May 30, 1908, from nephritis, aged 45.

Deane Richmond, M.D. University of Vermont, Burlington, 1882; physician to the Vermont State Prison for several years; died at his home in Windsor, February 1, from tuberculosis, aged 47.

Elizabeth James, M.D. Hahnemann Medical College, Chicago, 1876; of Chicago; died in Cook County Hospital, February 8, two months after a fall in which she fractured her leg at the hip, aged 78.

Washington Brenton, M.D. Rush Medical College, Chicago, 1854; a pioneer practitioner of Tuscola, Ill.; died at the home of his daughter in that city, January 28, from senile debility, aged 85.

John Hutchison, M.D. Queen's University, Kingston, Ont., 1869; of Toronto; formerly of St. Thomas, Ont.; died in St. Michael's Hospital, Toronto, from nephritis, February 1, aged 62.

James Elmer Marsh, M.D. Jefferson Medical College, Philadelphia, 1884; a member of the American Medical Association; died suddenly at his home in Springfield, Mass., January 23, aged 50.

John Bailey, M.D. Homeopathic Hospital College, Cleveland, Ohio, 1862; a hospital steward during the Civil War; died at his home in Sioux City, Iowa, February 2, from diabetes, aged 77.

Orville Augustus Olson, M.D. Rush Medical College, Chicago, 1903; of Axtell, Neb.; was instantly killed in a railway accident between Dotsero and Spruce Creek, Colo., January 15, aged 32.

S. G. Robertson, M.D. University of Pennsylvania, Philadelphia, 1860; a member of the Arkansas Medical Society; died at his home in Monticello, January 29, from heart disease, aged 71.

Edwin Clinton Dennin, M.D. Long Island College Hospital, Brooklyn, N. Y., 1895; of South Brooklyn, N. Y.; died in Long Island College Hospital, February 1, from pneumonia, aged 39.

E. M. C. Neyman, M.D. Jefferson Medical College, Philadelphia, 1836; formerly of El Reno, Okla.; died at his home in Saltillo, Ind., January 4, from senile debility, aged 100.

William S. Edwards, M.D. Jefferson Medical College, Philadelphia, 1856; died at his home near Siler City, N. C., January 15, from influenza, complicating malaria, aged 76.

Leonard Dearth, M.D. Medical School of Maine, Brunswick, 1884; formerly of Foxcroft, Maine; died recently at his home in Los Angeles, Cal., from rheumatism, aged 50.

George Hemminger, M.D. Detroit Medical College, 1869; formerly a member of the American Medical Association; died at his home in Carlisle, Pa., January 21, aged 64.

David L. Garland, M.D. University of Nashville (Tenn.) 1901; formerly of Rabun Gap, Ga.; died at his home in Clayton, Ga., January 22, from nephritis, aged 37.

Simeon M. Robertson, M. D. College of Physicians and Surgeons, 1878; died at his home in Mount Vernon, Ill., from tumor of the stomach, January 30, aged 69.

Alexander Williamson, M.D. University of Pennsylvania, Philadelphia, 1878; died at his home in Asbury Park, N. J., from heart disease, February 2, aged 61.

John W. Petrie (years of practice, Ill., 1878), an eclectic practitioner of Nilwood, Ill.; died suddenly at his home, January 31, from heart disease, aged 75.

Joseph Henry Spears, M.D. Jefferson Medical College, Philadelphia, 1853; died at his home in Augusta, Ga., April 1, 1908, from cholelithiasis, aged 76.

Frank G. Taylor, M.D. Eclectic Medical Institute, Cincinnati, 1875; died at his home in Reynoldsburg, Ohio, January 29, from kidney disease, aged 57.

James Monroe Garvey, M.D. University of Buffalo (N. Y.), 1882; of Tower, Mich.; died in a sanitarium at Traverse City, Mich., February 1, aged 69.

Bricey M. Owen, M.D. Atlanta (Ga.) Medical College, 1869; of Hollonville, Ga.; died at the home of his daughter in Haralston, Ga., January 30, aged 65.

Mary A. Jenks (license Rhode Island, 1895), for fifteen years police matron of Pawtucket, R. I.; died at her home in that city, January 26, aged 77.

Barnabas Malloy (years of practice, Ill., 1878), formerly of Olney, Ill.; died in St. Louis, January 28, while on his way to Texas for his health.

Corlis Mason Holt, M.D. Cornell University, New York City, 1902; of Newfield, N. Y.; died February 2, from spinal meningitis, aged about 50.

John G. Hall (years of practice, Ill., 1887), was found dead in his room in Springfield, Ill., February 2, from gas asphyxiation, aged 80.

Jefferson Davis Hooker, M.D. Louisville Medical College, 1886; died at his home in San Antonio, Dec. 1, 1908, aged 47.

Herbert E. A. Hanke, M.D. Hahnemann Medical College, Chicago, 1905; died at his home in Chicago, February 4.

Book Notices

THE NATURAL HISTORY OF CANCER. By W. Roger Williams, Fellow of the Royal College of Surgeons. Cloth. Pp. 519. Price, $5.00. New York: William Wood and Co., 1908.

Once in a while—but all too rarely—we find a book whose author has for years pondered his subject, considered it from innumerable aspects, accumulated a vast fund of facts bearing on it, and finally become saturated with it. Such a book is entitled to respectful consideration, and needs no explanation for its addition to the flood of literature which overwhelms us. The book under consideration is one of this sort. It is the work of a man who has evidently given the thought of a lifetime to the problems of cancer. The work is an attempt to marshal the known facts of cancer for the purpose of considering them by the methods of inductive reasoning—Williams calls it a synthetic research. It is really the method of Darwin applied to the subject of cancer. The result is not a solution of the cancer problem, but it is a most instructive and illuminating review of our knowledge of the subject.

The book is a colossal collection of facts. Behla has published a bibliography of carcinoma literature to 1900, and this mere bibliography is a large octavo volume of 250 pages. Williams apparently has been on terms of intimate familiarity with all that literature for years, and has taken pains to make himself immediately acquainted with all that has appeared since that date. In this work he considers the subject of cancer in the broadest way. Geographical distribution and incidence, topographical distribution, cancer and other tumors in animals (as distinguished from man), tumors in vegetable organisms, the genesis of malignant tumors, the experimental study of cancer genesis, cancer and tumor growths in relation to growths in general—these few chapter headings may serve to suggest the extent of Williams' purview of the subject. Perhaps it should be said that this does not include a formal consideration of the histology of cancer.

Williams' temper, we should say, is a combination of the philosophical and the militant. He is no respecter of authority and is impatient, justly we think, with the common tendency to consider cancer almost exclusively from the laboratory standpoint. His work has an avowed purpose, which is highly dangerous to its scientific character—that is, he starts out to maintain a thesis: "From the biologic standpoint, tumor formation may be regarded as a phenomenon of the same order as reproductions in general—that is to say, as a special form of overgrowth of the individual. This implies recognition of the affinity between tumor formation and morphologic variation in general. . . . What is variation but a novel kind of cell multiplication? And what is tumor formation but a special variety of this novelty? . . . In the sequel it will be shown that the determining factor, the true cause of all these variations, is nutrition—using the term in its widest sense." But his spirit is philosophical and his method scientific, and, while we can not always accept his conclusions, he arrives at no absurd positions, and his surveys and opinions stimulate thought, even when they do not

receive acceptance. He has a sonorous, classical diction, which is distinctly agreeable. His is none of your flippant Kiplingesque English, but a sound Johnsonian style, fit to tell dignified facts in a dignified way. Every now and again the reader encounters a term like "generalities de tumoribus," that he enjoys, because it reminds him of his Latin and is not too hard for him to understand. The book is a valuable addition to cancer literature and is worthy of careful reading by every one who wishes to have a large view of the cancer problem.

MODERN MEDICINE. Its Theory and Practice. In Original Contributions by American and Foreign Authors. Edited by William Osler, M.D., Regius Professor of Medicine in Oxford University, England. Assisted by Thomas McCrea, M.D., Associate Professor of Medicine and Clinical Therapeutics in Johns Hopkins University, Baltimore. Volume V, Diseases of the Alimentary Tract. Cloth. Pp. 903, with illustrations. Price, $6. Lea & Febiger, 1908.

This volume is devoted to diseases of the alimentary tract, and is divided into ten chapters, as follows: 1, introductory discussion on the diseases of the digestive apparatus, by Charles G. Stockton; 2, diseases of the mouth and salivary glands, by David Riesman; 3, diseases of the esophagus, by John McRae; 4, functional diseases of the stomach, by Julius Friedenwald; 5, organic diseases of the stomach, by Charles F. Martin; 6, diseases of intestines, by Alfred Stengel; 7, diseases of the peritoneum, by Humphrey Davy Rolleston; 8, Splanchnoptosis, enteroptosis, or Glénard's disease, by Thomas R. Brown; 9, diseases of the pancreas, by Eugene L. Opie; 10, diseases of the liver, gall bladder and biliary ducts, by A. O. J. Kelly. The volume is probably one of the most evenly balanced in the series and the amount of space assigned to the different topics seems to be in good proportion to their importance. The articles are thorough and well written and the volume undoubtedly contains the best and most complete summary in English of the present knowledge of the diseases of the alimentary tract. While this liberal praise is accorded, attention must at the same time be called to certain shortcomings which this volume shares with its predecessors. The number of references given varies greatly in the different articles, some, like Riesman's article on the mouth and salivary glands and Rolleston's on the peritoneum being abundantly supplied with uniformly arranged and, with some exceptions, correctly abbreviated references, while most of the other articles have comparatively few, and those are given in a haphazard manner. Moreover, there is no authors' index. These are defects that lower the usefulness of the volume and prevent it from reaching that highest grade of scholarship our newest and largest systematic treatise on medicine should have maintained throughout.

PRACTICAL LIFE INSURANCE EXAMINATIONS. By Murray Elliott Ramsey, M.D. Cloth. Pp. 239. Price, $1.25. Philadelphia and London: J. B. Lippincott Co., 1908.

The importance of medical selection in the field of life insurance is evidenced by the activity of medical writers on insurance. The work of Dr. Ramsey is the latest of several good manuals; while it contains little that is new, it is worthy of commendation on account of the clarity and systematic arrangement of the chapters on physical examination of the chest and abdomen. The chapters on "Diseases and Conditions Affecting Life Insurance" and on "Insurance of Substandard Lives" present briefly and plainly opinions and conclusions which are at present considered sound. Future statistics will doubtless modify some of these conclusions.

A DICTIONARY OF MEDICAL TREATMENT. By Arthur Latham, M.A., M.D., Oxon., M.A., Cantab., F.R.C.P., Lond., Physician and Lecturer on Medicine at St. George's Hospital. Cloth. Pp. 825. Price, $2.00. Philadelphia: P. Blakiston's Son & Co., 1908.

Dr. Latham's aim in this book is to describe a definite course of treatment to be pursued in diseases that present a typical, uncomplicated course. The subjects are arranged alphabetically; the diseases of the skin and of the nervous system are considered, in addition to the diseases usually assigned to internal medicine. Many minor ailments also come in for a share of attention. The methods of treatment are those generally accepted by the modern practitioner, and are, therefore, reliable. The Schott-Nauheim treatment is described separately, in addition to being referred to under the diseases in which it is indicated. Frenkel's exercises are described separately, but Dr. Latham, unfortunately, does not in that connection say in what disease or diseases they are applicable—an oversight which should be corrected in subsequent editions. Under the subject of locomotor ataxia they are again mentioned as a useful exercise. Moreover, Dr. Latham spells the name of the author of the exercises as Fränkel. THE JOURNAL (July 18, 1908, li, 239) pointed out the correct spelling, which is Frenkel.

LES MERVEILLES DE L'HYPNOTISME. Par Géraud Bonnet médicin practicien à Oran. Paper. Pp. 281. Price, 3.50 francs. Paris: Jules Rousset, 1909.

Bonnet gives a cursory review of the history of the subject, discusses autohypnotization, and describes the various types and common characteristics of the hypnotic states, for he holds that not one, but many such exist. He discusses the subject both theoretically and practically, and insists on the reality of nervous force as an entity. He further discusses telepathy, spiritistic phenomena, fascination, natural sleep, and that induced by drugs and anesthesia. Frankly, we do not like the title of this book. The medical profession is waging war against the "marvelous" in medicine, with its appeal to inherited superstitious instincts, but Dr. Bonnet seems to trade on the marvelous. Psychotherapy, including hypnotism, has its place in medicine, and, when the present furor has settled down, will fall into and occupy that place; but works that discuss the subject from the point of view of the "marvelous" are hardly adapted to hasten that much-to-be-desired time.

BESTIMMUNGEN ÜBER DIE ZULASSUNG ZUR ÄRZTLICHEN PRAXIS IM AUSLANDE. Von J. Schwalbe, in Berlin. Second Edition. Paper. Pp. 206. Leipzig. Verlag von Georg Thieme, 1908.

This pamphlet by the editor of the *Deutsche medizinische Wochenschrift*, gives in a very compact form the requirements for admission to medical practice in all civilized countries. The arrangement is alphabetical. In addition to the legal requirements, the book gives in reference to some countries notes on the climate, cost of living and the probable chance of success by a foreign physician settling there, viewed especially from the standpoint of German physicians. The information seems to be very complete, and will certainly be valuable to those interested in the regulations of medical practice, and may prove of value to some American physicians who wish to change their field of professional activity.

Medicolegal

Limitation on Right of Licensed Practitioners of Medicine to Practice Dentistry

The Supreme Court of Minnesota holds, in the case of State vs. Taylor, that a person who is licensed to "practice medicine and surgery" under the statutes of that state can not by virtue thereof "practice dentistry" without securing a license as a dentist, as required by Chapter 117 of the General Laws of Minnesota of 1907.

The defendant in this case was a licensed physician and surgeon and claimed that such license entitled him to engage in the incidental practice of dentistry on his own patients. He extracted two teeth for one of his patients and took an impression in wax of the mouth and cavities. He sent this impression to a dental laboratory, where artificial teeth were made and returned to him, and he delivered them to his patient and received a fee of some $38 for his services. It was conceded that he did not hold a certificate from the State Board of Dental Examiners authorizing him to practice dentistry in Minnesota, and that what he did came within the terms of the statute which defines the practice of dentistry. He was therefore properly convicted, unless protected by his license as a physician and surgeon.

The statute provides that a person shall be regarded as practicing medicine "who shall append the letters M.D. or M.B. to his name, or for a fee prescribe, direct or recommend for

the use of any person any drug or medicine or other agency for the treatment or relief of any wound, fracture or bodily injury, infirmity or other disease: Provided that this section shall not apply to dentists." It is true, as the defendant contended, that the practice of medicine and surgery in its broad and comprehensive sense includes the practice of dentistry, which "is medical, surgical or prosthetic. In so far as it is a direction of medical science to the prevention, modification or removal, by medicinal and hygienic remedies, of the causes and effects of disease in the dental organs, it forms part of the physician's practice, just as does the treatment of cerebral, cardiac or pulmonary diseases. In so far as it is an application of surgical skill to the fractures or to staphylorrhaphy, it is simply oral surgery, involving only such knowledge and skill in the use of instruments as every surgeon must possess." Harris, Principles and Practice of Dentistry, p. 33.

In the absence of any legislative declaration to the contrary, a certificate authorizing the holder to practice medicine and surgery would therefore entitle him to practice dentistry. But for reasons of public policy, with which the court has no particular concern, the legislature adopted the policy of dividing the field of medicine and surgery, and making a separate profession of a part thereof. It was thought that men who engaged in the treatment of diseases of the dental organs should receive special preparation and be specially licensed to practice that particular branch or department of medicine and surgery. A State Board of Dental Examiners was created and authorized to determine who should be licensed and entitled to practice dentistry in the state. A department of Dental Surgery was also established at the university, with a course of study, the satisfactory completion of which would entitle the student to a special degree of Dental Suregon. An examination of this course shows that it includes a considerable part of the work required in the medical school, but it also includes studies which relate particularly to diseases of the dental organs and others designed to insure efficiency in the mechanical work connected with the treatment.

The statute now in force provides that: "No person shall practice dentistry in the state without having complied with the provisions of this subdivision. . . . Any person who shall . . . violate any provision of this subdivision shall be guilty of a misdemeanor." And: "All persons shall be said to be practicing dentistry within the meaning of this section . . . who shall for a fee, salary or other reward paid or to be paid either to himself or to another person . . . replace lost teeth by artificial ones."

The legislature has thus defined both the practice of medicine and the practice of dentistry, and made of them two distinct professions. This statute relating to dentistry makes no exception in favor of one who holds a certificate entitling him to practice as a physician and surgeon. The court can find no implied exceptions in this statute. The words "no person" in a criminal statute, are to be given their literal meaning. From an examination of the statutes of other states relating to the practice of dentistry, the court learns that many contain express exceptions in favor of physicians and surgeons. Probably the most of them permit physicians to extract teeth or perform such other comparatively simple work. In the absence of any such exceptions, it must conclude that the legislature intended to restrict the scope of the practice of the physician and surgeon, and require him, if he desires to practice dentistry, to obtain a license from the State Board of Dental Examiners in addition to his other certificate. What was said in State vs. Vandersluis, 42 Minn. 129, to the effect that the statute then under consideration would not limit the right of a surgeon under his license, was dicta, and is not controlling.

The conviction in this case is affirmed.

Power of Courts to Order Exhumation of Bodies for Examination by Physicians in Aid or Defense of Criminal Proceedings

The Court of Criminal Appeals of Texas had in Gray vs. State, a homicide case, the novel and important question of whether a court had the power to appoint a commission of reputable and competent physicians and surgeons to make an autopsy of the body of the deceased, and to order that the commission cause the body of the deceased to be disinterred and that the commission make such thorough examination of said body as would enable them to give definite and reliable testimony of the character of the wounds, their range and depth, and as to the number of bullets lodged in the body.

The court says that it has been held that the right of interment and the right to disinter are subordinate to public health, and that the disinterment may be compelled by public authorities whenever conditions become such as that the public health is threatened.

It is evident from the authorities, both in Texas and elsewhere, that neither the right of sepulture, nor the right to have the body remain untouched and unmolested, is an absolute and fixed right, but these rights must and should yield when they conflict with the public good or where the demands of justice require such subordination.

It was not to be denied that none of the authorities which the court cited, or others to which its attention had been called, was directly in point. By analogy they furnished some aid, but it was to be confessed this was slight. The court's own reflection convinces it, however, that in legal reason, and based on public policy and enlightened justice, there can be no reasonable doubt as to what the court should do in a case such as was here presented. Courts were instituted among men for the purpose of promoting justice, the ascertainment of the truth in all controversies pending in such tribunals, and for the protection of life, liberty and property. To fairly and rightly accomplish these laudable purposes, the supreme desire and purpose is, and in every case should be, by every consideration and fair rule, to ascertain the very truth of the matter in controversy, and by such rules of evidence as will, in their nature, accomplish this result.

It will be conceded, of course, that if a body could not be exhumed when an indictment was pending and the grave be made to yield up its secret, and an examination made at the instance of the defendant, such exhumation and examination ought not to be made, in a similar case, at the instance of the state. To do so would not only be manifestly unfair, but would be such a partial discrimination against the defendant as would shock the moral sense of all fair-minded men. And yet to refuse to the state authority on a proper showing and in a proper case, so to do, would in many cases permit the most abandoned criminal to go unwhipped of justice, unless such action was or might be taken by a justice of the peace, and the law, in its weakness and impotence, to be made a byword and pure mockery.

To say that the district court has no power to order, and if need be with its full power compel, such an exhumation as was here sought, is to say that no court can do so. It presents the singular anomaly that in a merely suspected case of unnatural death, where no charge of murder is pending, and in a proceeding where no punishment can be meted out, an examination may be had, but that where the charge is made, and it is an issue of life or death, none can be had. It is, as was contended by the state, allowed where the proceeding is preliminary and unimportant, and denied where it is vital. It is, under the state's contention, conceded to the most obscure judicial officer known to our system in advance of a trial, and denied on the trial to our chief and most important court sitting as such. The power inheres in such court, or there is, in such a case as was here presented, no such authority anywhere.

On rehearing, the court says that it had again reviewed the question from every point of view, and had arrived at the settled conviction, which had been rather strengthened by its subsequent investigation, that the original opinion was right, the law, and that it ought to stand.

The court believes that whenever it shall be necessary to the ends of justice, an examination of the inanimate body of the deceased in the jurisdiction of the court should be made, and that the court has the power, and should exercise the right to require the exhumation made.

If it could be said that there was no precedent for action, it can never be said again, because the rule and precedent is here established.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Boston Medical and Surgical Journal

February 4

1 *Internal Concealed Hemorrhage. J. R. Torbert, Boston.
2 Feeding of the Infant in Health. D. R. Brown, Salem, Mass.
3 Congenital Neuroglia Tissue Nests in the Meninges of the Spinal Cord, with Report of a Case Associated with Other Congenital Defects. C. T. Ryder, Boston.
4 *Osmic Acid Injections for Relief of Trifacial Neuralgia. H. H. Germain, Boston.

1. **Internal Concealed Hemorrhage.**—Torbet describes the process by which this condition is produced and reports cases, of which one is of special interest from a diagnostic standpoint and as showing what can be accomplished in the line of stimulation, as well as with regard to the choice of operation in emptying the uterus. The plan of gradually letting up the pressure proved in this case particularly successful. He thinks it safe to say that if routine examination of the placenta and membranes were practiced, more cases of small detachments would be discovered than are now found. He discusses the etiology, in regard both to exciting and to predisposing causes, the symptoms and diagnosis, differential diagnosis, prognosis and treatment. Quiet may be induced by morphin. In the mild cases nearly two-thirds of the patients will go to term, or labor will be completed without untoward results. While agreeing in the main with Holmes' contention, that aggressive action will save most lives, there is a large group of cases in which the patient is in extremely poor condition, and here there is sufficient evidence in favor of holding off until by stimulation the patient can be got into better shape for interference. The author considers that the tampon has a limited, but exceedingly practical, use in extreme cases, in softening up the hard cervix, when the uterus has reached its limit of distention. He does not agree with Holmes that in all cases in which version is selected, extraction should be immediate, on account of the partially emptied uterus failing to contract leading to further hemorrhage; for in one of his cases, in which the vagina was packed to soften the os, and in which the membranes were ruptured with a catheter, the fluid being allowed to run out slowly, while at the same time the uterus was briskly massaged, the uterus contracted well; there was no further hemorrhage. He controlled the uterus by holding it for some hours after delivery, and deemed it unnecessary to pack the uterine cavity. He draws the following conclusions:

Internal concealed hemorrhage is a comparatively rare complication of pregnancy.
Unless diagnosticated early it has a serious prognosis.
It occurs generally in the last two months of pregnancy.
The diagnosis is made by careful examination both of the mother and of the infant within the uterus.
The importance is urged of an examination of all obstetric patients in the last months of pregnancy and of keeping close watch on both the maternal and fetal pulse during the progress of the labor.
Palpation is important in diagnosticating these cases, as the uterus is much increased in size and of a board-like consistency.
The appearance of acute anemia with manifestations of shock in a patient in the later months of pregnancy should always suggest the possibility of internal concealed hemorrhage.
Early diagnosis is essential in offering a favorable prognosis to the mother; that of the infant is bad.

4. **Osmic Acid Injections for Trifacial Neuralgia.**—Germain briefly reports eleven cases and concludes: 1. Osmic acid injections will relieve trifacial neuralgia for a longer or a shorter period of time. 2. Relief from pain is not immediate, but follows in a few days after injection. 3. It may be followed by a certain amount of necrosis of tissue at the point of injection. 4. It is little if any better than other peripheral operations. 5. It is best used in a 2 per cent. solution injected directly into the nerve, using a glass syringe and a platinum needle. 6. It is to be used only in purely sensory nerves, as its employment in mixed nerves is followed by motor paralysis. In regard to the latter he pleads for greater conservatism and the treatment by hygienic measures and astringents. He gives the indications for the complete removal of adenoid vegetations as follows: (1) Nasal obstruction, causing mouth breathing and its sequelæ; (2) recurring attacks of earache; (3) stupidity and inability of the children to concentrate attention; (4) stunted growth, and in all cases of purulent otitis media in children; (5) in infants whose inability to nurse is due to adenoids, otherwise he never operates on infants under 1 year of age, and believes it a crime to do so. He describes the operation.

Medical Record, New York

February 6

5 *The Eye of Yesterday and of To-day. F. Valk, New York.
6 Some Serious Lapses in Administrative Hygiene. H. Wakefield, New York.
7 Acute (Hemorrhagic) Encephalitis, with Report of Cases. G. B. Hassin, Chicago.
8 *Factors in the Etiology of a Common Cold. R. C. Brown, Milwaukee.
9 Case of Interstitial Pregnancy. B. M. Baker, Norfolk, Va.

5. **The Eye.**—Valk gives instances of the knowledge of the physiology of the eye in the days of Rush, and reviews the most notable advances in diseases of that organ. He describes as chief among them, the prevention and treatment of ophthalmia neonatorum. The addition of spirit of nitrous ether to the silver solution keeps it always fresh by preventing precipitation of oxid. Valk's formula is: Silver nitrate, 5 grains (0.32 grams); spirit of nitrous ether, 2 drams (6.75); water, 6 drams (22.50). He particularly emphasizes the importance of cleanliness, asepsis and gentleness. He refers to the implication of the eye from systemic infection following an acute attack of gonorrhea, and points out the advance made in the practical abolition of the postdiphtheritic paralysis of accommodation, subsequent to the introduction of the antitoxin treatment, as demonstrated by the investigations by Bylsena of Middleburg, Germany. He urges the more frequent use of the ophthalmoscope by the general physician, and discusses the question of how much knowledge of eye diseases the general practitioner should be taught in the school, pointing out that the needs of the city practitioner, who has ready access to eye specialists, are different from those of the country practitioner, who may often be compelled to deal with cases calling for some special knowledge. He therefore points out some general objective symptoms by which patients may be treated so as to prevent serious complications or serious impairment of vision. There are certain symptoms that suggest a "snap diagnosis," which is all right and a useful shortcut if subsequently verified by proper examination. For instance, if there is no photophobia it is doubtful if the disease involves important structures. It will probably be found to affect only the conjunctiva and to require only astringents. If, however, photophobia exists, involvement of deeper structures is at once suggested, and the early use of atropin may prevent serious mischief later. He discusses keratitis in like manner. He reviews the improvement in the eye wards, now well lighted and ventilated, the fall in percentage of failures after cataract operation, and the advantages produced by the use of cocain. He discusses the question of refraction, eye motility, and the reflex effects of eyestrain—in which while admitting its importance, he deprecates what he considers the extravagant propositions of some—at considerable length, and also the subject of diplopia. The article is eminently suited to the needs of the general practitioner.

8. **The Common Cold.**—Brown discusses the character of a common cold, more particularly with regard to the prevailing view that it is an infection, either specific or due to lowered resistance of the body laying it open to attack by innumerable micro-organisms, and reviews both these theories critically. He says that before the human race had been accustomed to clothes and overheated houses colds were probably infrequent. Exposure to cold and catching cold are not synonymous. When the body is put to an effort to conserve its heat, as in exposure to cold, there is not much danger of catching cold, but when the body is put to an effort to lose its heat, or is in other words overheated, there is great danger. The greatest likelihood of colds comes when the body is at one time overprotected and at another underprotected. When a skin area which is usually overprotected, is exposed to a draft, an over-impulse is conveyed to the vasomotor cen-

ter, an exaggerated response is sent out, and the peripheral blood vessels are contracted over a large area. If, under these conditions, the temperature is taken, it will be found to have risen slightly. The body which was attempting to lose heat, finds itself further embarrassed as the radiation from a considerable portion of the skin has been shut off. The turbinates being a means by which heat is lost, it is not strange that, under the circumstances, vasomotor impulses should be sent to them, and that the tortuous blood vessels of these bodies should be dilated to the point of overcongestion. On this theory, both the so-called habit of taking cold and treatment for prevention of colds can be explained. The more often the nerve impulses are sent through certain channels, the easier does the impulse follow that channel, so that in a sensitive person the slightest exposure will result in a cold in the head. On the other hand, through the intelligent use of clothing, right living, and the proper use of baths, the skin may be kept in such a condition that it will send only normal impulses. The author therefore prefers the view of the vasomotor origin of cold.

New York Medical Journal

February 6

10 Tuberculosis. J. D. Bryant, New York.
11 *Amnesia from a Medicolegal Standpoint. A. Gordon, Philadelphia.
12 Care and Treatment of Dependent, Neglected, Crippled and Deformed Children. N. M. Shaffer, New York.
13 *Prophylactic Inoculations Against Typhoid. H. Shoemaker, Philadelphia.
14 *Sequelæ of Adenoids. A. J. Herzig, New York.
15 Epiploitis Following Radical Cure of Inguinal Hernia. C. G. Cumston, Boston.
16 *Physiologic Action of Strong Cocain Adrenalin Solutions. J. Leshure, New York.
17 Keeping and Handling of Rats for Laboratory Purposes. G. W. McCoy, San Francisco.
18 Clinical Gonorrhea in the Male (concluded). M. Huhner, New York.
19 Care of Crippled Children of the Poor by the State of New York. J. P. Fiske, New York.

11. **Amnesia.**—Gordon details the case of Frank Endrukat, who committed murder in 1908 and shot himself in the brain, but entirely recovered, the bullet remaining in the skull. All memory of the period of the crime and the events relating to it had disappeared, but his memory of events preceding persisted, while all his faculties after the suicidal attempt appeared intact. Gordon discusses the problem of amnesia and how to prove whether amnesia is general or simulated. Memory is the result of impression of facts on the cerebral tissue. It is a general function of the intellect, which consists in reproducing images, ideas, emotions and sensations previously acquired. Two main elements demand consideration, the fixation of facts, images, etc., and their reproduction. The external manifestation of memory impressions depends on the will of the individual himself. Memory may therefore be admitted or denied, but real diminution or complete loss is well known in cerebral nosology. From a pathogenetic standpoint amnesia may be functional or organic as regards its evolution; it may be temporary or permanent, certain or progressive, periodical or intermittent. Organic amnesias as in the dementias are usually progressive and permanent, affecting first the recent events and proceeding toward the more distant and firmly fixed. In functional disturbances, memory may be lost for a certain group of ideas or for a fact or facts occurring during a certain period of life. In the latter case amnesia may extend to the period of time immediately preceding a certain forgotten event (retrograde), or following it (anterograde). In exceptional instances it may be general. The essential distinction between the organic and functional amnesias lies in the fact that the former are progressive and intimately associated with the gradual deterioration of the psychic function, while the latter are sudden in their onset. The former are incurable, the latter may be curable. When a crime is committed by one suffering or having suffered from any of these forms of amnesia the first step is to determine whether the loss of memory is dependent on an irreparable cerebral lesion or is functional, as, for instance, in hysteria with periodical attacks of double consciousness. The author discusses various classes of cases in which impulsive acts are committed without the individuals having the least recollection thereof. In epilepsy, a convulsive attack may be followed by an impulsive act of which no recollection remains. Gordon discusses the legal bearings of these amnesias, paying special attention to those of hysteria, multiple personality, intoxication, insolation and traumatism. He asks: Does or does not the loss of memory for a former criminal act, of which the author was then responsible, destroy his responsibility? This question, he says, is purely legal, and the expert should leave it entirely to the court. From a medical point of view, whatever the degree of loss of memory may be, the amnesic can not be determined, as by virtue of the amnesia itself the patient is incapable to present his defense properly, and consequently to confer with counsel on an act of which he is totally ignorant. This is the process of the arguing presented by him at Endrukat's trial.

13. **Typhoid Fever Prophylactic Inoculations.**—Shoemaker summarizes the principal papers that have advanced this subject to its present status, and sets forth briefly his own experiences with prophylactic inoculation, which lead him to the conclusions that the evidence of bacteriolytic and bactericidal activity higher than the normal and the presence of agglutinin can be obtained from the serum of those who have been inoculated.

14. **Adenoids.**—Herzig discusses the etiology and heredity, the pathology, diagnosis, symptoms, sequelæ, and indications for operation.

16. **Cocain Adrenalin Local Anesthesia.**—Leshure summarizes his article as follows:

1. To induce a maximum degree of local anesthesia and ischemia, with a minimum of general drug absorption, it is necessary to use solutions of high density, which do not readily enter the larger blood and lymphatic glands.
2. The diluting effect of the mucous membrane secretions must be borne in mind, and cotton wound applicators should be frequently changed, and freshly charged with the cocain-adrenalin solution.
3. Before beginning to operate one should carefully test every part of the field with a probe to determine whether the anesthesia is complete. It is difficult to anesthetize when bleeding has once begun, and the patient will greatly appreciate the extra effort made to spare him needless pain.

Albany Medical Annals

January

20 *Appearance of Glycuronic Acid in Certain Conditions of Diminished Oxidation. C. W. L. Hacker, Albany.
21 *Clinical Study of Hypernephroma, with Pathologic Reports. G. E. Beilby, Albany.
22 *Influence of the Reduction of Kidney Substance on Nitrogenous Metabolism. R. M. Pearce, Albany.
23 *Presence of Nephrotoxic Substances in the Serum of Animals with Experimental Nephritis. R. M. Pearce and H. P. Sawyer, Albany.
24 *Study of Experimental Reduction of Kidney Tissue with Special Reference to the Changes in that Remaining. J. A. Sampson and R. M. Pearce, Albany.
25 *Relation of Lesions of the Adrenal Gland to Chronic Nephritis and to Arteriosclerosis: An Anatomic Study. R. M. Pearce, Albany.
26 Physiochemical Study of Salt Elimination in the Urine of an Individual with General Edema of Obscure Origin Followed by Cure. H. C. Jackson and A. W. Elting, Albany.
27 *Occurrence of Spontaneous Arterial Degeneration in the Rabbit. R. M. Pearce, Albany.
28 Effect of Conditions on the Latent Period and Rate of Aseptic Postmortem Autolysis During the First Ten Hours. H. C. Jackson, Albany.
29 Inferior Longitudinal Bundle and the Geniculo-calcarine Fasciculus. L. Archambault, Albany.
30 Two Cases of Primary Carcinoma of the Appendix. G. W. L. Hacker, Albany.

20. Published in THE JOURNAL, Jan. 25, 1908, p. 252.

21. Published in *Surgery, Gynecology and Obstetrics*, September, 1908.

22. Published in the *Journal of Experimental Medicine*, September, 1908, and abstracted in THE JOURNAL, Oct. 3, 1908, p. 1184.

23. Published in the *Journal of Medical Research*, October, 1908, and abstracted in THE JOURNAL, Nov. 28, 1908, p. 1903.

24. Published in the *Journal of Experimental Medicine*, November, 1908.

25. Published in the *Journal of Experimental Medicine*, November, 1908, and abstracted in THE JOURNAL, Dec. 12, 1908, p. 2089.

27. Published in THE JOURNAL, Sept. 26, 1908, p. 1056.

American Journal of Obstetrics and Diseases of Women and Children, York, Pa.

January

31 Comparison of Lesions Found Postmortem in Cases Diagnosticated Clinically as Eclampsia and Toxemia of Pregnancy. J. E. Welch, New York.
32 Cardiac Disease as a Complication of Pregnancy. G. H. Ryder, New York.
33 When Shall the Operation for Tubal Pregnancy be Performed? B. F. Baer, Philadelphia.
34 *Delayed Operation in Terminated Ectopic Pregnancy. C. A. Stillwagen, Wilkinsburg, Pa.
35 *Psychotherapy and Re-Education. E. Garrigue, New York.
36 *Abdominal Surgery without Detached Pads or Sponges. H. S. Crossen, St. Louis.
37 *Typhilitis. J. A. Lyons, Chicago.
38 *Vaginal Cesarean Section in Eclampsia. O. P. Humpstone, Brooklyn.
39 Splenic Anemia of Infancy. A. D. Smith, Brooklyn.

34. Abstracted in THE JOURNAL, Nov. 7, 1908, p. 1629.

35. **Psychotherapy.**—For Garrigue, the keynote of psychotherapy is moral re-education, the awakening of the inward perception of what must be done and the cultivation of courage and will power to enable the patient to do it, for the patient is the one who must do the work. The physician can and must point out the road and be guide and director to the goal of health, but the moral responsibility of getting there and remaining there lies with the patient. No other than the patient can do the real work of recovery any more than one student can gain an education for another. It involves individual responsibility, individual effort, and individual intelligent work.

36. Abstracted in THE JOURNAL, Oct. 17, 1908, p. 1355.

37. Abstracted in THE JOURNAL, Oct. 24, 1908, p. 1459.

38. **Eclampsia.**—Humpstone's paper urges eclampsia before or during labor without complete shortening of the cervix as an important indication for anterior vaginal hysterotomy. He discusses the difficulties and dangers of the operation, the principal dangers being hemorrhage and sepsis. He considers that the absence of reports of evil results in subsequent labors is evidence that its effects are not deleterious. He reports five cases.

Annals of Ophthalmology, St. Louis

January

40 *Hereditary Blindness and Its Prevention. C. Loeb, St. Louis.
41 Comparisons Between the Eyes of Insects and of Man. P. P. Calvert, Philadelphia.
42 Ophthalmic Origin of Otic Disturbances with the Cerebellar Control of the Eyes. F. P. Lewis, Buffalo.
43 *Beginning Signs of Retinal Angiosclerosis. W. Reber, Philadelphia.
44 *Gross Obstructive Vascular Disease in the Retina. C. M. Harris, Johnstown, Pa.
45 Embolism of a Macular Artery and Thrombosis of Superior and Inferior Retinal Arteries in a Case of Embolic Softening of the Brain. W. T. Shoemaker, Philadelphia.

40. **Hereditary Blindness.**—Loeb's attention was called to the family history of an inmate of the Missouri School for the Blind, which showed the presence of cataract in all the members of the family for at least five generations. He discusses the question whether or not there is such a thing as hereditary blindness, and says that on purely theoretical grounds it can not be denied that it is at least a possibility, since the eye, like the other organs, is the resultant of long ages of evolutionary processes. He publishes a letter sent out to 1,750 oculists asking for information on certain points, and to which 152 replies were received. These he analyzes and finds that 84 are opposed to the marriage of two blind persons, while 52 are opposed to the marriage of a blind with a seeing person. He discusses the nature of heredity, the various forms of disease which his reported cases tend to show may be hereditary, and the best method of preventing hereditary blindness. He emphasizes the following points:

1. All whose life work brings them into relationship with the blind should be aware of the dangers connected with the marriage of a blind person.
2. The blind themselves should be warned of the danger to their children in case of marriage.
3. A distinction must be made between hereditary and non-hereditary forms of blindness.
4. Legal assistance should be invoked to prevent blind people from marrying.
5. This law should apply only to those cases of blindness in which heredity has been proved. With the exception of glaucoma and cataract, these diseases usually manifest themselves at or before the marrying age.
6. A law compelling every person to have an oculist's certificate before marriage, though idealistic, would be impracticable.
7. The general public should be educated in the dangers arising from hereditary blindness. A lengthy appendix (to be continued) publishes the replies received to the before mentioned circular letter.

43. See Abstract No. 136.

44. Abstracted in THE JOURNAL, Oct. 17, 1908, p. 1457.

Annals of Surgery, Philadelphia

January

46 *Studies in Cancer—Historical and Critical. J. G. Mumford, Boston.
47 *Serum Reaction in Cancer. H. H. Janeway, New York.
48 Newer Conceptions of Operative Technic in Cleft Palate and Harelip. J. R. Eastman, Indianapolis.
49 *Aberrant Thyroid. B. C. Cushway, Chicago.
50 *Suppurative Pericarditis. E. Eliot, New York.
51 Restoration of the Perineal Portion of the Urethra After Destruction by Fracture of the Pelvis. H. Cabot, Boston.
52 Catheter Fever. L. J. Hammond, Philadelphia.
53 Cruroscrotal Hernia. A. H. Ferguson, Chicago.
54 Giant-Cell Sarcoma of Forearm. A. C. Wood, Philadelphia.
55 Modification of the Bradford Frame for Treatment by Suspension or Puncture of the Femur in Young Children. D. Silver, Pittsburg.
56 Portable Traction Apparatus for Treating Fractures of the Femur and for Various Orthopedic Operations. C. M. Echols, Milwaukee.
57 Intestinal Intussusception Complicating Typhoid. O. C. Smith, Hartford, Conn.
58 Modified Crile Tube for Direct Transfusion of Blood. T. N. Hepburn, Hartford, Conn.

46. **Cancer.**—Mumford reviews the story of cancer as it has been developed in the writings of nearly two thousand years, and shows that the two aspects of the problem, the cause and the cure, have constantly exercised investigators throughout this long period.

47. **Serodiagnosis in Cancer.**—Janeway describes the method of serodiagnosis and analyses a series of twenty cases, from which he concludes that in suspected cases of cancer the patients should have the serum tested against the normal corpuscle emulsion. If negative it would be advisable to make a second and more comprehensive test.

49. **Aberrant Thyroid.**—Cushway says that the following points may suggest the presence of aberrant thyroid:

1. A tumor located most frequently in the anterior or lateral triangles of the neck.
2. Tumor mass may increase in size during period of menstruation.
3. Tumor may be first noticed and increase in size at puberty.
4. Greater frequency in women.
5. Growth usually slow and without attendant symptoms unless cyst formation takes place.

50. **Suppurative Pericarditis.**—Eliot emphasizes strongly his belief that in every case of pyopericarditis the patient, if not moribund, should be operated on, and that in those cases in which a general anesthetic can not be tolerated, operation may yet be successfully carried out under cocain or some other suitable local anesthetic. He summarizes a series of cases from the literature and adds one of his own.

Archives of Otology, New York

December

59 The Membrana Tectoria and the Theory of Tone Perception. G. E. Shambaugh, Chicago.
60 Cerebellar Tumor Involving the Auditory Nerve. G. L. Biggs, London.
61 Negative Pressure as a Therapeutic Agent in Diseases of the Nasal Accessory Sinuses, Throat, Ear and Mastoid. E. R. Lewis, Dubuque, Iowa.
62 Phlebitis without Thrombosis as Cause of Obliteration of Sinus in Children. S. Kramm, Berlin.
63 Treatment of Acute Middle Ear Suppuration, with Nipple-Shaped Perforation, by Aspirating Pus into the External Meatus. O. Muck, Essen, Prussia.
64 Epidermic Cysts Following Transplantation in Cavity Produced by Radical Mastoid Operation. W. Schoetz, Heidelberg, Germany.
65 Functional Examination of the Organ of Hearing in Deaf-Mutes. G. Alexander and G. W. Mackenzie, Philadelphia.
66 Structure and Function of the Epithelium in the Sulcus Spiralis Externus. G. E. Shambaugh, Chicago.
67 Arterial Hemorrhage from the Auditory Meatus in a Child, After a Brief Attack of Acute Otitis Media Following Tonsillitis with Tonsillar Abscess. J. A. Spalding, Portland, Maine.
68 Sinus Thrombosis, with Atypical Symptoms. Operative and Pathologic Findings. S. J. Kopetzky, New York.
69 Unsuspected Necrosis of the Petrous Bone. Meningitis. Death. Coexisting Mastoid Suppuration and Extradural (Cerebellar) Abscess. H. Hastings, Los Angeles, Cal.
70 Bacterial Suspensions in Treatment of Aural Suppuration. R. Connor, Detroit, Mich.

Buffalo Medical Journal

January

71 Mineral Nutrients, Air, Water and the Salts. H. R. Hopkins, Buffalo.
72 Renal Decapsulation for Puerperal Eclampsia. W. E. Jones, Rochester, N. Y.
73 Vaccination for Smallpox. Should It be Discontinued and Abolished? J. B. Colegrove, Washington, D. C.
74 New Duty of the Medical Profession: The Education of the People in Scientific Medicine. S. W. S. Toms, Nyack, N. Y.

Bulletin Johns Hopkins Hospital, Baltimore

January

75 John James Wepfer, a Renaissance Student of Apoplexy. J. E. Donley, Providence, R. I.
76 Dissecting Aneurism. W. G. MacCallum, Baltimore.
77 *Persistent Bacteriuria. J. T. Geraghty, Baltimore.

77. **Persistent Bacteriuria.**—Geraghty reports four cases and discusses the nature of the condition. He draws the following conclusions:

1. Bacteriuria, when persistent, is always due to organisms of slight pathogenicity.
2. Bacteriuria due to the *Bacillus coli communis* produces an acid urine. When due to *Staphylococcus albus* it may be alkaline and give rise to a troublesome phosphaturia.
3. It is secondary to some focus in the urinary tract or neighboring organs.
4. It may persist indefinitely despite all treatment without producing any inflammatory reaction on the part of the vesical mucosa.
5. The results of vaccine therapy are entirely negative.

Denver Medical Times and Utah Medical Journal

January

78 Summation of Data in Regard to the Appendicular Artery in Sixty-five Personal Dissections. B. Robinson, Chicago.
79 Dr. John Brown. E. S. Pratt, Denver, Colo.
80 *Use and Abuse of Salt with Food. H. O. Beeson, Calcite, Colo.
81 Gymnasium and Training in Personal Hygiene as Factor in Overcoming Abnormalities of Health During Infancy and Puberty. C. G. Plummer, Salt Lake City, Utah.

80. **Use and Abuse of Salt.**—Beeson does not share the common belief that salt is an aid to digestion, and holds that the universal use of salt is no argument that it is necessary. Its actual use depends on the fact that small molecules serve to hold in solution the various colloid and crystalloid materials. Its abuse lies in the fact that in excess it interferes with digestion, inhibits glandular action, retards secretion, lays the foundation for the reaction of succorrhea and secondary infection and taxes the emunctories, thereby diminishing functional efficiency. He discusses its influence in delaying or perverting digestion and describes his experience in obtaining relief within a week from a ten years' progressive fermentative intestinal indigestion, by cutting out all supplementary salt. He concludes that the claim that salt is an aid to digestion is not founded on experiments or observations, but solely on perverted taste. The taste for salt with food is acquired. Infants do not get much of it. Wild animals never take it with food, and only those that eat vegetable food containing a minimum of salt ever seek it.

Dominion Medical Monthly, Toronto

January

82 Two Cases of Facial Hemiatrophy. G. Chambers, Toronto.

Journal of the Tennessee State Medical Association, Nashville

January

83 Ureteral Catheterization. R. A. Barr, Nashville.
84 Lithemia. T. O. Burger, McMinnville, Tenn.
85 Affections of the Blood Vessels of the Liver. R. J. McFall, Cumberland City, Tenn.

Texas State Journal of Medicine, Fort Worth

January

86 The Louisiana System of Hygienic Education. F. J. Mayer, New Orleans.
87 *Division of Fees. B. Saunders, Fort Worth.
88 An Impermeable Esophageal Stricture. Operation. Recovery. J. S. Wooten, Austin.
89 Diagnosis and Office Treatment of Some Gynecologic Patients. J. W. Torbett, Marlin.
90 Hyperpephroma of the Kidney. A. L. Hathcock, Palestine.
91 Treatment of Extensive Burns. E. J. Neathery, Sherman.

87. Abstracted in THE JOURNAL, Oct. 31, 1908, p. 1536.

Journal of Cutaneous Diseases, New York

January

92 *Congenital Alopecia as an Expression of Atavism. J. N. Hyde, Chicago.
93 Study of Acnitis with Report of an Extensive Case. J. F. Schamberg, Philadelphia.
94 Use of Liquid Carbon Dioxid. J. Zeisler, Chicago.

92. **Congenital Alopecia.**—Hyde discusses the following conditions and reports notable cases:

1. Complete and universal absence of hair at birth, not succeeded later in life by a piliary growth. This is believed to be an intrauterine atrichia due to a failure of development of the hair-pouches.
2. Universal congenital hypotrichiasis, in which at birth hairs exist in all regions of the body, but later fail to be succeeded by filaments normal in length, vigor, color, and texture. Two subvarieties of this condition have been recognized: (a) the infant at birth is provided with the relatively long hair of most normal infants; this in due time falls and is replaced by a scanty down which later in life fails to ensure a normal hirsuteness of the scalp; (b) after birth the infant fails to lose the temporary hair of the scalp, which persists, but later develops merely a scanty or ill developed piliary growth.
3. Complete or partial absence of hair at birth in definitely circumscribed regions, such as the scalp, the brows, the pubes, or the axillæ. The anomaly is rare, and persistence through life still rarer. Many published observations are lacking in detail of special importance.

Dentists have given scanty attention to the hair and nails; physicians have often neglected to describe the dental conditions. The absence of hair may affect one, several, or all regions of the body. In the records of congenital alopecia individuals are cited, not only of one family, but of generations of a single family, who have been similarly affected. Hyde discusses coincident anomalies, of which those of the eyes appear to be the rarest. He considers the condition in the light of comparative pathology and embryology.

Louisville Monthly Journal of Medicine and Surgery

January

95 Cardiovascular Effects Induced by the Use of a Drug not Therapeutically Understood. W. H. Rubovits, Chicago.
96 Hyperchlorhydria and Its Treatment [illegible] on Animal Experiments. M. M. Portis, Chicago.
97 Surgery of the Stomach. J. G. Sherrill, Louisville, Ky.
98 *Why Operations for Bunion Fail, with a Description of One that Does Not. J. L. Porter, Chicago.

98. Published in the *Lancet-Clinic*, Dec. 26, 1908, and abstracted in THE JOURNAL, Jan. 16, 1909, p. 248.

Memphis Medical Monthly

January

99 More About Cancer of the Rectum. G. B. Evans, Dayton, Ohio.
100 Psychotherapy—Its Relation to the Medical Powers of Nature. J. S. Rawlins, Dancyville, Tenn.
101 Anasarca and Edema. L. Leroy, Memphis.
102 Social and Business Side of Medicine. L. E. Moore, Searcy, Ark.
103 Glioma of the Retina. J. F. Rowland, Hot Springs, Ark.

Northwest Medicine, Seattle, Wash.

January

104 *Intracranial Complications of Mastoid Disease. W. House, Portland, Ore.
105 Appendicitis in Pregnancy. E. O. Jones, Seattle, Wash.
106 *The Emmanuel Movement and Its Relation to Medicine. F. Hinman, Spokane, Wash.

104. **Mastoid Disease.**—House discusses the intracranial complications of this disease. He describes the anatomy of the auditory canal and the mode of development of cranial complications on the blocking up of the secretion from the middle ear which takes place when the Eustachian tube ceases to be patulous. He summarizes the symptoms of various possible complications as follows, evidence of middle ear being presupposed in all, stating, at the same time, that any pulse in the presence of mastoid or middle-ear disease which becomes slower than normal is a danger signal that must not be disregarded:

EXTRADURAL IRRITATION.—Headache, not localized, but worse on same side of skull. Vertigo, usually slight. Special sense symptoms: Word deafness or blindness; partial aphasias; perversions of smell. Psychic abnormalities; pupillary reaction slower on same side than its fellow; knee-jerks increased, but equally.

EXTRADURAL ABSCESS.—Increase in subjective symptoms of above. Appearance of septic symptoms. Increase in opposite knee-jerk. Pupil on same side slower, and in dim light larger than its fellow. Slow pulse. Sighing respiration possible.

ABSCESS OF CEREBRUM.—Increase of all signs of extradural abscess: Great headache; stupor and bebetude; pinched countenance; very slow pulse, usually below 56, dropping as pressure increases as low as 26. Numbness of muscles of opposite side. Partial hemiplegia. Impaired deglutition. Irregular respiration. Marked difference in knee-jerks; opposite one greater. Wide pupils; pupil on same side the larger; choked disc or optic neuritis possible.

CEREBELLAR ABSCESS.—General signs of pus as in cerebral abscess: Nystagmus; sensation of rotation of objects; intense vertigo; cerebellar fit. Prior to death spread of infection may bring on signs of meningitis.

MENINGITIS.—Septic symptoms very marked; rapid pulse; irregular respirations; large pupils; seminnconsciousness or unconsciousness; rigid neck. Cranial nerve involvement, producing strabismus, conjugate deviation of orbits, etc.; difficult deglutition, Cheyne-Stoke's respiration, high fever and death.

106. **The Emmanuel Movement.**—Hinman discusses this movement and holds that it can do a great deal of good if wisely executed and carefully controlled. It does not necessarily encroach on the duties of the medical profession.

Therapeutic Gazette, Detroit

January

107 Results Following Operations. J. G. Clark, Philadelphia.
108 Alcoholism and its Treatment. W. House, Portland, Ore.
109 *Shall We Bleed?—Shall We Blister? R. L. Hinton, Prescott, Ark.
110 Actions of Bile and Some of Its Constituents on Intestinal Peristalsis and the Circulation. I. Ott, Easton, Pa., and J. C. Scott, Talma, Ind.
111 *Method of Protecting Abdominal Wounds Against Infection by Means of a Peritoneal Tube, with Special Reference to Its Use in Connection with the Gridiron Operation in Septic Cases. G. Torrance, Birmingham.

109. **Bleeding and Blistering.**—Hinton reports cases of pneumonia, catarrhal pneumonia and congestion of the bowels in which bleeding and blistering were used to advantage. He says that if the physician has decided that the case is suitable for bleeding he must have confidence in the remedy and use it boldly, not sparingly, or the patient will fail to get its benefit. He discusses the objection of blood letting as a drain on the system and has never yet been able to see in reason, and certainly not by observation and experience, that the disgorging and unclogging of an important vital organ by removing a mass of impure blood, tends to the much-dreaded prostration.

111. **Protecting Abdominal Wounds Against Infection.**—Torrance describes his method as follows: The ordinary "gridiron" operation is done, and the peritoneum is then caught up and incised in the line of the skin incision; each side of the peritoneal wound is then drawn out and sutured to the skin on both sides with a running suture of catgut or a few interrupted sutures. Retractors may then be put in and the adhesions broken up and the appendix removed; one or two small drains are now placed, and each end of the incision closed around them by means of one or two through-and-through silk-worm-gut sutures. To insure better approximation of the deep layer of muscles a silkworm-gut suture may be placed on either side of the skin incision before the peritoneum is opened, and left to be tied when the operation is completed.

Yale Medical Journal, New Haven, Conn.

January

112 Early Diagnosis of Gallstones. R. H. Fitz, Boston.
113 Heredity and Environment. F. N. Braman, New London, Conn.
114 *Grocco's Sign. G. Blumer, New Haven, Conn.
115 *Bearing of Recent Investigations on the Treatment of Typhoid and Its Complications. C. J. Foote, New Haven, Conn.

114. **Grocco's Sign.**—Blumer thinks it must be concluded, after a critical survey of the facts at hand, that paravertebral dulness, when decidedly triangular in shape, is fairly distinctive of pleural effusion when associated with signs of intrathoracic diseases. It also seems certain that it is of distinct value in the recognition of small effusions, and of encapsulated effusions, provided that these are in contact with the spinal column. When the triangle does occur as a result of disease below the diaphragm, it is usually symmetrical, differs in shape from the typical triangle of pleural effusion, and should be distinguished without trouble on this account, and on account of the presence of symptoms pointing to intra-abdominal disease.

115. Abstracted in THE JOURNAL, July 25, 1908, p. 339.

American Journal of Urology, New York

January

116 Some Cases of Tuberculosis of the Kidneys of Diagnostic Interest. L. Casper, Berlin, Germany.
117 Indications for and Technic of Partial Nephrectomy. C. G. Cumston, Boston.
118 Sounds Versus Dilators. A. Ravogli, Cincinnati.
119 Lyron Robinson's Three Ureteral Isthmuses. T. B. Wood, Chicago.

West Virginia Medical Journal, Wheeling

January

120 Indications for and Comparative Methods in Removal of the Eye. W. K. Butler, Washington, D. C.
121 Treatment of Perforative Peritonitis. R. J. Reed, Wheeling.
122 Complications and Sequelæ Affecting the Respiratory and Circulatory Systems. R. J. Hersey, Wheeling.
123 *Nervous and Mental Complications of Influenza. J. R. Bloss, Huntington.
124 Nose, Throat and Ear Complications of Influenza. T. W. Moore, Huntington.
125 Diagnosis and Treatment of Typhoid Fever. L. L. Edgell, Keyser.
126 Minor Things in Medicine. J. F. Bigony, Hinton.

123. Abstracted in THE JOURNAL, June 6, 1908, p. 1933.

Vermont Medical Monthly, Burlington

January

127 Differential Diagnosis of Scarlet Fever, with Special Reference to the Scarlatiniform Eruptions. G. R. Pisek, New York.
128 Colitis, Sigmoiditis and Rectitis, and Importance of the Proctoscope in Their Treatment. T. C. Hill, Boston.
129 Complications of Pneumonia. G. S. Bates, Morrisville, Vt.

University of Pennsylvania Medical Bulletin, Philadelphia

January

130 *Some Newer Facts in Connection with Diabetes Mellitus. The von Noorden Diet Tables. J. Tyson, Philadelphia.
131 Operative Treatment of Papillo-Edema (Choked Disc), with Special Reference to Decompressing Trephining. G. E. de Schweinitz and T. B. Holloway, Philadelphia.
132 Variations in the Arteries of the Human Body. G. Fetteroif, Philadelphia.
133 *Tumors of the Salivary Glands. J. Speese, Philadelphia.

130. **Diabetes Mellitus.**—Tyson discusses acidosis and other important facts which have increased the efficiency of the symptomatic treatment. He describes the following test for acetone: To 15 c.c. of urine add 1 c.c. of acetic acid and a drop of strong sodium nitroprussid solution. Float on top of this from 5 c.c. to 10 c.c. of ammonium hydrate. The end-reaction is shown by a beautiful purple at the line of contact, communicated to the urine if the tube is shaken. He cites the important practical conclusions revolutionizing in some respects our treatment of diabetes but verified by experience, that in very bad cases, so far from carbohydrate food being harmful, it becomes actually necessary in order to secure a proper proteid metabolism, and prevent the circulating and fixed proteids from breaking up into the volatile acids which contribute to acidosis and diabetic coma. He discusses the von Noorden diet table.

133. This article also appears in the *Pennsylvania Medical Journal*, January, 1909.

Pennsylvania Medical Journal, Athens

January

134 *Some Obstetrical Kicks. J. H. Wilson, Beaver.
135 Tumors of the Salivary Glands. J. Speese, Philadelphia.
136 *Begining Signs of Retinal Angiosclerosis. W. Reber, Philadelphia.
137 *Gross Obstructive Vascular Disease in the Retina. C. M. Harris, Johnstown, Pa.
138 *Relation of the Faculty of Hearing to the Faculty of Speech. G. Hudson-Makuen, Philadelphia.
139 Importance of First-Aid Dressings in Wounds of Civil Life. G. W. Guthrie, Wilkes-Barre.
140 *Need of Better Provision for the Treatment of Mental Disease in Its Early Stage. J. M. Mosher, Albany, N. Y.
141 Medical Requirements in Pennsylvania. A. R. Craig, Philadelphia.
142 Random Thoughts on Medical Organization. W. B. Konkle, Montoursville.

134. Abstracted in THE JOURNAL, Oct. 3, 1908, p. 1179.

136. Abstracted in THE JOURNAL, Oct. 17, 1908, p. 1357, and also published in *Annals of Ophthalmology*, January, 1909.

137. Abstracted in THE JOURNAL, Oct. 17, 1908, p. 1357, and published in *Annals of Ophthalmology*, January, 1909.

138. Abstracted in THE JOURNAL, Oct. 24, 1908, p. 1456.

140. Abstracted in THE JOURNAL, Oct. 10, 1908, p. 1270.

Medical Herald, St. Joseph, Mo.

January

143 Care of Perineum During and After Parturition. J. H. Talboy, Story City, Iowa.
144 Some of the More Unusual Uses of Plaster of Paris in General and Orthopedic Surgery. H. W. Orr, Lincoln, Neb.
145 Immunity to Disease. C. B. Hardin, Kansas City, Mo.
146 Treacherous Character of Appendicitis. E. Lanphear, St. Louis.
147 Treatment of Bronchopneumonia in Infants and Children. L. C. Davis, South Milwaukee, Wis.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

January 23

1 *Myoma and Pregnancy. Sir W. Smyly.
2 Adenomyoma of the Uterus. J. Bland-Sutton.
3 Cases of Adenocarcinoma of the Uterus. K. M. M. Kerr.
4 Ruptured Tubal Pregnancy at Four Months: Operation in Cottage. Recovery. T. L. Llewellyn.
5 Pyelitis of Pregnancy Treated with *Bacillus coli* Vaccine. H. T. Hicks.
6 Acute Inversion of the Uterus. A. W. Holthusen.
7 *An Experiment in Treatment of Epilepsy. D. Goyder.
8 Fingellation of Lymphocytes in Presence of Excitants Both Artificial and Cancerous. H. C. Ross and C. J. Macalister.
9 Treatment of Pernicious Anemia. B. Bramwell.
10 Free Use of Bacteriologic Cultures for the Destruction of Rats and Mice. J. Danysz.
11 Acute Pancreatitis Followed by Pancreatic Abscess: Operation: Recovery. C. H. Robinson.
12 Arrow Wounds in Northern Nigeria. A. C. Parsons.

1. **Myoma in Pregnancy.**—Smyly considers the subject, first as regards the effect of pregnancy on the tumors; and secondly, as to the effect of the tumors on the course of pregnancy, childbirth and the puerperium. Pregnancy in a myomatous uterus causes changes in the position, size, shape, and consistence of the tumor. The tumors rarely give rise to serious complications in the course of pregnancy, childbirth and puerperium; but the following symptoms have been recorded as due to them: Hemorrhages, abortions, placenta prævia, ectopic pregnancy, intestinal obstruction, ischuria and obstruction of the ureters, with consequent hydronephrosis; twisting of the pedicle with peritonitis; and serious pressure symptoms from the great size of the growth, or from retroversion and impaction of the uterus in the pelvis. Owing to the fact that many symptoms are common both to the tumors and to pregnancy, there is often great difficulty in diagnosis. During labor, tumors of the body of the uterus seldom give rise to trouble, though they may cause uterine inertia and obstruct dilatation when situated in the lower segment or cervix. But large tumors adherent in Douglas' pouch, or which have developed into the subserous areolar tissue, may cause serious and even insuperable obstacles to delivery. Malpresentations and placenta prævia occur with frequency. In the third stage myomata cause trouble more frequently than in any of the other stages—inversion of the uterus, adhesion of the placenta, postpartum hemorrhage and septic complications. During pregnancy interference is seldom called for, although removal has been practiced without interrupting gestation. The induction of abortion has been abandoned. At term and during labor, when no obstruction or other complication occurs, no special treatment is needed. Polypi should be removed and cervical myomata enucleated, but tumors growing into cellular tissue can seldom be removed *per vaginam* without great danger. In large and obstructing tumors the obstetrician should make it a rule to wait as long as spontaneous delivery is possible, but not long enough to render operation useless. Efforts to drag the fetus past the obstruction by forceps, version, etc., are generally to be condemned. Cesarean section alone is seldom sufficient. It should usually be combined with enucleation of the tumors or extirpation of the uterus. Panhysterectomy has proved more successful than the supravaginal operation, for the stump is commonly septic and obstructing tumors are usually situated so low that a disease-free stump can not be obtained. When the fetus is known to be dead it is better to remove the uterus unopened.

7. **Epilepsy.**—Goyder reports an experiment of the Bradford guardians who removed the sane epileptics from the workhouse to test the effect on them of open air residence with appropriate occupation, but with entire exclusion of medical treatment or the use of any drugs, it having been asserted that this course would reduce the number of attacks and would probably effect a cure. The method of treatment previously followed by Goyder, of giving these patients sodium bromid as salt with the food and excluding the use of common salt, was therefore suspended. He watched the results, which he tabulates, and which show a great increase in the number of attacks, which again subsided on the restoration of the sodium bromid treatment. In observing the effect of the bromid treatment, it is found that when the epileptics come under its full influence they become rather listless, stupid, and drowsy; that is the expected result, and a result to be attained; it indicates the point of saturation of the system by the salt, the point when the fits become controlled; the daily dose can then be diminished one-half, but not altogether discontinued. The drowsy, listless, symptoms soon pass off and the patient is again fit for work. It should be said that the administration of the salt is not confined to giving a definite amount with the three daily meals, but the bread is especially baked for the patients, the amount of common salt usually mixed with the dough being excluded and replaced by an equivalent of the bromid salt.

Lancet, London

January 23

13 *A Recapitulation Lecture (on Skin Diseases). Sir J. Hutchinson.
14 *Fractures of the Olecranon and Their Treatment by Direct and Internal Splintage. E. M. Corner.
15 *Intestinal Indigestion. P. J. Cammidge.
16 Cause of Achromasia in Leucocytes. H. C. Ross.
17 "Endemic Funiculitis." D. K. Coutts.
18 Infantile Splenic Anemia, with Notes of Ten Cases. W. K. Hunter.
19 Hospital Work in Egypt. H. B. Day.
20 Precept of the Archbishop of Canterbury (A. D. 1445) Forbidding Barbers to Carry on Their Trade Sundays. D'A. Power.

13. **Recapitulation of Skin Diseases.**—Hutchinson discusses the following conditions: acromegaly, sudoriparous cysts with xanthelasmic pigmentation, xanthelasmic pigmentation, xanthoma glycosuricum, xanthelasmic milium, leprosy, the early diagnosis of cancer, tumors of the female breast, common pruriginous eruptions of childhood and alopecia areata.

14. **Fractures of the Olecranon.**—Corner studies a number of cases of fractures of the olecranon, and discusses the principles and practice of direct internal splintage as applied to them. He holds that his studies of the results of wiring the olecranon have demonstrated the following points: 1. Internal splints lead to absorption of the hard substances of the bone round them. 2. This condition in its turn leads to the loosening of the internal splint, and therefore the more easily to its breaking with a sudden effort, to the commencing extrusion of a screw, and to some separation of the fragments. 3. If the part is kept at rest by external splints, in addition, the soft bone around the internal splint will harden and ossify, bringing about bony union between the fragments. 4. If the part is exercised, as it must be when the fracture is in the neighborhood of a joint, the fragments are still further separated from each other and the union between them is fibrous, not bony. 5. A perfectly good and excellently functional limb is obtained with such a fibrous union, with some possible limitation of extreme flexion and extreme extension. 6. This limitation is caused by the adhesion or cicatrical contraction of the attachments of the olecranon to the humerus; putting the triceps at a mechanical disadvantage, arising and being inserted on the same bone. 7. The advantage of direct and internal splintage lies solely in its allowing movements to be begun early, preventing much limitation to the movements of the olecranon on the humerus. 8. From the point of view of the subsequent value of the limb, it makes little or no difference whether the union between the fragments is fibrous or bony, provided that the olecranon moves freely. 9. It is a matter of indifference as to the nature of the internal splint used, such as a silver wire, copper wire, iron wire or silk. Screws are not so good as sutures in this situation; an absorbable suture is not a good internal splint, because its presence will be required for some weeks at least. 10. For success the operation area must not suppurate. 11. In neglected cases the fragments of the broken ulna may become more and more separated, and if the skin becomes adherent a violent effort may tear open the joint. 12. An excellent result can be obtained with or without operation, provided the olecranon does not become restricted in its movements on the humerus; the more its restriction, the worse the result. Hence the mobility or immobility of the olecranon on the humerus is a very important clinical index of the value of operation in the case. 13. If the fragments are to be sutured the operation

should be done as soon after the accident as the condition of the skin allows. 14. Operation is indicated in the majority of cases, particularly by wide separation of the fragments in the early period and by the imperfect mobility of the olecranon in the later stages. 15. The earlier that operation is undertaken the better the prognosis of its results.

15. **Intestinal Indigestion.**—Cammidge discusses the alterations in the digestive processes leading to intestinal indigestion. He describes the symptomatology, and in diagnosis insists especially on a complete and exhaustive analysis of the feces, macroscopically, microscopically, chemically and bacteriologically. In analysis of the urine, special attention must be devoted to the pancreatic reaction. The stomach contents should be examined, both before and after a test meal, for evidence of hyperchlorhydria, catarrh, dilatation, etc. The early recognition of intestinal indigestion is of great importance, for toxemia may arise and unfit the patient for any mental work, and many such patients drift into the "somewhat heterogeneous group of cases provisionally labeled 'neurasthenia.'" A remote consequence is diabetes, apparently due to involvement of the pancreas. It is usually slow and insidious.

Medical Press and Circular, London

January 20

21 *Cerebral Abscess. W. Taylor.
22 Salicylates in Rheumatic Affections. R. Stockman.
23 Syphilitic Facial Paralysis. Prof. G. Millan.
24 *Mangosteen Treatment of Dysentery. M. Ambrose.

21. **Cerebral Abscess.**—Taylor discusses cerebral and cerebellar abscesses, and particularly makes the point that, in these days of diagnostic lumbar puncture, great caution must be displayed in using it in the presence of cerebral or cerebellar abscess, lest the altered conditions of tension lead to rupture of the abscess into the membranes.

24. **The Mangosteen in Dysentery.**—Ambrose gives the history of four cases, out of some hundred, recorded during epidemics in the Far East, in which the failure of ipecacuanha and other customary treatments was followed by the adoption of a Penang native remedy, namely the rind of the mangosteen fruit. The mangosteen rinds are roasted and powdered and mixed with Chinese sugar in the proportion by weight of two of the former and one of the latter. From half a dram to a dram of this powder is administered every three or four hours until formed stools, free from blood and mucus, are passed. He describes the botany of the fruit, which comes from the *Garcinia mangostana*, N. O. *Guttiferæ*.

Clinical Journal, London

January 20

25 Malaria. F. M. Sandwith.
26 Sore Eyelids. N. B. Herman.
27 Pathology of the Ovum. J. Bland-Sutton.

Journal of Hygiene, London

November

28 Toxicology of Nickel Carbonyl. H. W. Armit.
29 Outbreak of Poisoning from Infected Brawn (Pork Cheese). W. G. Savage and C. H. Gunsen.
30 Rôle of Bacteria in the Biologic Methods of Sewage Purification, with Special Reference to Dentrification. W. Mair.
31 *Principles Involved in the Standardization of Disinfectants and the Influence of Organic Matter on Germicidal Value. H. Chick and C. J. Martin.
32 Comparison of the Power of a Germicide Emulsified or Dissolved, with an Interpretation of the Superiority of the Emulsified Form. H. Chick and C. J. Martin.

31. **Disinfectants.**—Chick and Martin describe an elaborate series of experiments looking toward a mode of standardizing disinfectants. They describe the conditions that must be complied with in comparing the germicidal value of disinfectants, and suggest means to satisfy them. They discuss the special considerations involved in the case of disinfectants containing mercury, the choice of a test organism, and the influence of organic matter. They also describe a method of standardizing disinfectants in the presence of feces.

Australasian Medical Gazette, Sydney

December

33 *Status of Obstetrics and Gynecology. E. T. Thring.
34 The Status of Dermatology. W. McMurray.
35 *Applications of the Precipitin Reaction in Diagnosis of Hydatid Disease. D. A. Welsh, H. G. Chapman and J. C. Storey.
36 Early Recognition and Treatment of Puerperal Sepsis. T. G Wilson.
37 Abuse of Hospitals and Its Effect on the National Character. R. Worrall.
38 Rupture of Stomach—Partial Gastrectomy—Recovery. T. Ambrose.
39 Case of Henoch's Purpura. W. C. Howle.
40 Diphtheria Outbreak at Boulder, West Australia. R. A. Parker.

33. **Status of Obstetrics and Gynecology.**—Thring pleads for a broader standpoint and a more thorough training in matters gynecologic. He considers it necessary that we should reconsider the position of gynecology and obstetrics: First, as to their relation to general surgery and medicine; secondly, as to the training necessary for those who practice them; and thirdly, as to the probable line or lines of advance in the immediate future.

35. **Precipitin Reaction in Hydatid Disease.**—Welsh, Chapman and Story refer to the results previously obtained by the first two and published in the *Australasian Medical Gazette*, January, 1908 (abstracted in THE JOURNAL, April 18, 1908, p. 1309) and in the *Lancet*, May 9, 1908 (abstracted in THE JOURNAL, June 6, 1908, p. 1945). Their present communication, which is of the nature of a progress report, deals mainly with the interactions of hydatid fluids (a) not derived from the patient whose serum was being tested, (b) of longer standing than those used in the first series of cases, and (c) subjected to various treatment, in order to preserve them in a sterile condition for many months. The conditions of experiment were, therefore, less favorable than in the first series of cases. The authors state their conclusions under the foregoing conditions as follows: 1. A precipitate is not obtained in any interaction between hydatid fluid and human serum from a patient not invaded by hydatid cysts: 2. Having regard to the long duration and probable irregularity of the interchange of protein molecules between a hydatid cyst and its human host, and having regard also to the possible unsuitability of the hydatid fluid, we must expect a certain number of precipitin tests to fail to give a satisfactory precipitate, and this has been the authors' experience. 3. In the conditions of a diagnostic precipitin test, as described by them for patients suspected of harboring hydatid cysts, a negative reaction is inconclusive, but a positive reaction is conclusive of hydatid invasion, and the latter may be obtained in circumstances of clinical importance.

Dublin Journal of Medical Science

January

41 Baths and Mineral Waters, and Some Fallacies Connected Therewith: A Criticism. W. G. Smith.
42 Study of Developmental Abnormalities as an Aid to that of Human Embryology, Based on Observations on a Persistent Left Superior Vena Cava. D. P. FitzGerald.
43 Sterilization. C. G. Cumston.

Journal of Obstetrics and Gynecology of the British Empire, London

January

44 Rosslin's "Rosegarten": Its Relation to the Past (the Musclo Manuscripts and Soranos), Particularly with Regard to Podalic Version. E. Ingerslev.
45 *Bacteria of the Puerperal Uterus, with Special Reference to the Presence of Hemolytic Streptococci. A. W. W. Lea and E. J. Sidebotham.

45. **Bacteria of the Puerperal Uterus.**—Lea and Sidebotham summarize their personal investigations as follows:

1. In a series of 58 cases in which the lochial secretion was examined between the second and ninth day after delivery, organisms were found to exist in the cervical canal and cavity of the uterus in 80 per cent. of the cases observed.

2. The organisms were mainly those which have been shown to be present in the vaginal secretion during pregnancy. There is, however, considerable evidence to show that organisms also ascend from without during the early days of the puerperium.

3. The course of the puerperium, in the great majority of cases, was entirely uninfluenced by the presence of organisms.

4. Streptococci were cultivated in 20 per cent of cases, and frequently showed marked power of hemolysis.

5. The presence of hemolytic streptococci in the vaginal or uterine secretion can not, in itself, be regarded as an indication of infection.

Intercolonial Medical Journal of Australasia, Melbourne

December

46 Present Position of Spinal Analgesia, an Experience of 278 Cases. B. T. Zwar.
47 Modern Methods in the Investigation of Gastric Disorders. J. F. Wilkinson.
48 Administration of Some General Anesthetics. R. T. Sutherland.

Archives Générales de Chirurgie, Paris

December, II, No. 12, pp. 554-664

49 *Early Typhoid Cholecystitis (Cholécystite typhique précoce.) L. Bobbio and Gennari.
50 *Esophagoscopy in Severe Cicatricial Stenosis of the Esophagus. (Du traitement par l'oesophagoscopie de nos derniers cas de rétrécissements cicatriciels à forme grave de l'oesophage.) Guisez.
51 *Transplantation of Ovaries. (Les greffes ovariennes avec ou sans anastomoses vasculaires.) Mauclaire.

49. Early Typhoid Cholecystitis.—Bobbio and Gennari relate a case of typhoid in a woman of 38, two months after her second childbirth. Five days after the first general symptoms pain developed in the right side and the gall bladder was seen to be much swollen. Five days later the pulse of 140 and temperature of 104 F. suggested acute cholecystitis with septicemia, and notwithstanding prompt operation the patient succumbed in a few days. The walls of the gall bladder were found studded with small miliary abscesses while the intestine had scarcely yet become involved in the typhoid process.

50. Treatment of Stricture of the Esophagus Under Esophagoscopy.—Guisez was able to cure by dilating or cutting in twenty-three out of 28 very serious cases of impassible stenosis of the esophagus. The esophagus was restored to normal size and shape and the patients are able to eat nearly or quite like other people. The results were better the more recent the development of the strictures. The short, valve-like strictures responded most readily; multiplicity of the strictures was no obstacle to final success, each one being treated in turn. The long strictures with longitudinal infiltration were the most difficult to cure and to keep cured as the stenosis displayed a great tendency to recur. He gives an illustrated description of the esophagoscope and cutting instruments used, with two views of one stricture before and after the three slits were cut in it.

51. Engrafted Ovaries.—Mauclaire goes over the history of transplantation of ovarian tissues, summarizing the 19 clinical cases in which autotransplantation gave remote positive results. He then summarizes 13 others in which the ovary was taken from another person. The last in the list is from his own practice. A woman of 29 with bilateral salpingitis for three years had long suffered from irregular, overfrequent and painful menses. He removed both tubes and ovaries, leaving the uterus, and implanted an ovary taken from a woman of 35, who had undergone an operation half an hour before for uterine fibroma and one ovary had been removed. The graft was not successful in this case, and the patient still suffers from the disturbances of the postoperative menopause. In another case he tried to re-establish the circulation through the implanted ovary by anastomosis of blood vessels, and he is convinced that success will lie in this direction. In conclusion he quotes with approval Franklin Martin's assertions in regard to the feasibility and promising future of engrafting the ovaries.

Bulletin de l'Académie de Médecine, Paris

January 5, LXXIII, No. 1, pp. 1-58

52 Improvement of Sclerosis in Patches Under Radiotherapy. (Deux cas de sclérose en plaques améliorés par la radiothérapie.) F. Raymond.

January 12, No. 2, pp. 59-92

53 Typhoid Epidemics at Toulon. L. E. Bertrand.
54 *Prophylaxis of Thrombosis and Embolism. (Coagulation et décongulation du sang dans les veines.) Chantemesse.

54. Prophylaxis of Thrombosis and Embolism.—Chantemesse describes a method by which it is possible to see at a glance whether the coagulating power of the blood is above or below normal. A minute quantity of the blood is mixed with a solution of some salt that prevents coagulation, and with a series of capillary pipettes containing equal amounts of a 1/400, 1/600, 1/700, 1/800, 1/1000, 1/1200 and 1/1500 solution of potassium oxalate, only two or three drops of blood are required to make an accurate test of the condition of the blood in regard to the coagulability at any time. This reveals impending hemorrhage or impending thrombosis, as the blood is seen to be less or more coagulable than normal. In case of the former, administration of a calcium salt will restore the coagulating power to normal, while if the blood coagulates too readily this can be remedied by administration of citric acid—the effects of each watched by repeating the test. He is confident that by this simple means it is within our power to ward off thrombosis and embolism after operations for uterine fibroma, etc., or childbirth, and to ward off hemorrhage in typhoid. He has noticed that whenever there has been much loss of blood from repeated external hemorrhage or internal hemolysis, the organism strives to defend itself against further loss of the kind by increasing the intravenous coagulability of the blood. In typhoid, for instance, and in uterine hemorrhage the coagulating power of the blood increases to a marked degree, and if the circulation becomes sluggish, either spontaneously or in consequence of some ligature, a thrombus gradually forms, then phlebitis, and sometimes—especially after operations for uterine fibroma—the catastrophe of embolism follows. He gave calcium salts to a patient with hemorrhagic typhoid until he overshot the mark and phlebitis resulted; then giving citric acid to render the blood more fluid, the phlebitis rapidly retrogressed, but he carried this to excess also and the hemorrhages returned. By the pipette potassium oxalate test it is possible to oversee the condition exactly and turn the scale at will.

Grèce Médicale, Syra, Greece

December 15, X, No. 24, pp. 45-48

55 Radical Treatment of Inguinal Hernia. E. Kallionzis. Commenced in No. 22.

Obstétrique, Paris

I, N. S., No. 6, pp. 561-628

56 Research on the Blood and Urine of New-Born Infants. (Recherches sur le sang et sur l'urine des nouveau-nés pour servir à l'étude de l'ictère simple des nouveau-nés.) V. Cathala and R. Daunay.

Presse Médicale, Paris

January 9, XVII, No. 3, pp. 17-24

57 *Typhoid Bacilli Carriers. (Porteurs de germes et fièvre typhoide.) R. Debré.
58 *Influence of External Temperature on the Glycosuria of Diabetics. H. Busquet.

January 13, No. 4, pp. 25-32

59 *False Sclerosis of Nervous Tissue. (Fausses scléroses du tissu nerveux.) G. Durante.
60 Dysenteric Amœbæ and Suppuration in the Liver. (Amibes dysentériques et suppuration du foie.) E. Marchoux.
61 Mydriatic Action of Serum and Urine in Nephritis and in Nephrectomized Animals. G. Macaroff.

57. Typhoid Bacilli Carriers.—Debré quotes statistics which show that in a recent analysis of 451 cases of typhoid in women in Germany, 80 per cent. were domestics more or less connected with the cooking of the meals. Rondet has recently observed a family epidemic in which typhoid developed in a series of cases as the persons ate food prepared by the members of the family caring for the sick and those who had recovered from the disease months before. This explains the family epidemics among the poor, as the persons taking care of the sick are also those who prepare the food. In wealthy families the cooks are responsible for the epidemics if they happen to be bacilli carriers—the persons taking care of the sick not participating in the preparation of the food. Job and Grysez have recently reported a typhoid epidemic which was traced to a creamery and persisted after strict disinfection. One of the employés was finally found to have had typhoid six months before and still to be harboring the bacilli. As soon as she was transferred elsewhere the epidemic ceased. He adds that the drastic measures adopted in Soper's case, reported in THE JOURNAL, June 15, 1907, page 2019, can seldom be applied, but that chronic typhoid bacilli carriers should at least be excluded from all occupations that have anything to do with food.

58. Influence of External Temperature on the Glycosuria of Diabetics.—Busquet's tests of three diabetic patients showed conclusively that the proportion of sugar in the urine constantly decreased when the patients were kept specially warm and increased in the cold. The tests were made with rooms heated to 11 and 12 C. (51 and 53 F.) or at a temperature of 20 C. (68 F.). He theorizes to explain this favorable action of warmth on diabetics, and draws the practical conclusion that diabetics should avoid cold and chilling and should seek to live in a warm even temperature. His clinical experience

confirms in every respect the findings of Lüthje with dogs after removal of the pancreas and glycosuric patients at a temperature of 30 C. (86 F.). Busquet did not apply such extremes of temperature.

59. **False Sclerosis of Nerve Tissue.**—Durante discusses the changes sometimes observed in nerve tissue and shows that some of them are more apparent than real. The nervous elements are modified but some of the fibers still retain their essential characteristics and are thus capable of restoration of function. This explains, he remarks, the clinical polymorphism so frequently observed, the clinical manifestations varying so widely with apparently identical lesions. His research demonstrates further the importance of training and functional re-education of nerves involved in these pseudofibrosarcomas and false scleroses involving the nervous system, instead of regarding them as beyond relief and neglecting further treatment.

Berliner klinische Wochenschrift

January 11, XLVI, No. 2, pp. 45-92

62 Pathology of Atrioventricular System and Heart Weakness. J. G. Mönckeberg.
63 *Case of Atrophy of the Pancreas. W. Keuthe.
64 *Progressive Polyarthritis in Patient with Psoriasis for Nearly Thirteen Years. (Arthropathia psoriatica.) G. A. Wollenberg.
65 *Remote Results of Cerebrospinal Meningitis. (Folgen der Erkrankung an Cerebrospinalmeningitis.) L. Cohn.
66 Antitryptic Action of Blood Serum. (Antitryptische Wirkung des Blutserums.) V. Fürst.
67 Primary Glaucoma. Helbron.

January 18, No. 3, pp. 93-140

68 *Origin, Prevention and Treatment of Tuberculous Glandular Processes in Neck. (Halsdrüsentuberkulose.) A. Most.
69 Autoserotherapy in Serofibrinous Pleurisy. Schnütgen.
70 Correlation Between Sexual Characteristics and Suprarenals. (Geschlechtscharaktere und Nebennlere in Correlation.) L. Thumim.
71 Importance of Tuberculin in Campaign Against Tuberculosis. S. Elkan.
72 Therapeutic Use of Emanations. A. Bulling.
73 *Sterilizing Properties of Osmotic Currents. (Ueber sterilisatorische Eigenschaften osmotischer Strömungen.) F. Holzinger.
74 Glucosimeter. (Eine neue einfache, quantitative Zuckerbestimmung mit dem Glukosimeter.) I. Zeehandelaar Jbz.

63. **Case of Atrophy of the Pancreas.**—Keuthe reports the details of a case of atrophy of the pancreas with two concrements, in a man of 56, the diagnosis being made during life with almost certainty. The atrophy was so extreme that no outlet to the organ was to be found. None of the six different functional tests applied gave positive information, but the findings combined rendered the diagnosis more than probable. The patient was under observation for six years during the exacerbations of the trouble while he returned to work during the intervals of comparative health. The first symptom was a sudden and violent diarrhea. He had had two attacks of typhoid fever and malaria for one year, about twenty years before the pancreatic symptoms. Some of the metabolic findings in this case have been previously published, and the autopsy findings are here illustrated.

64. **Joint Affection Accompanying Psoriasis.**—Wollenberg gives the skiagrams taken at an early stage of the progressive involvement of the joints in a young woman who had had psoriasis for thirteen years. Great benefit was derived from a six weeks course of mud baths, during which the joint disturbances and psoriasis almost completely vanished. New joints soon became affected, however. The prognosis is unfavorable, notwithstanding the great improvement to date. In the 100 cases on record of the kind very few cures have been recorded. The exacerbations generally parallel those of the skin affection. The lack of heart complications differentiates these cases from secondary chronic articular rheumatism. The skiagrams are particularly interesting because they show the condition within 6, 8 or 14 days of the first symptoms in the joints.

65. **Sequelæ of Epidemic Cerebrospinal Meningitis.**—Cohn reports his experiences with 82 cases of cerebrospinal meningitis; 50 of the patients died and 2 died within two years of an intercurrent affection; 27 of the others were recently examined. Complete recovery was the rule in all the mild cases. He found that after a month of apparent convalescence it is still possible for hydrocephalus to develop. All the signs of paralysis may retrogress, as also choked disc, but if deafness develops it seems to be irreparable. The serum agglutinated meningococci even after two years in two cases. In another case there was atrophy of the testicles.

68. **Prevention of Tuberculous Glandular Processes in the Neck.**—Most explains tuberculosis of the glands in the neck as due to an infection at the sources whence these glands derive most of their lymph. His research has shown that the danger points for invading infection are the tonsils and where the mucosa of the mouth, nose and eyes joins the skin; all other sources of infection are of subordinate importance. In 60 children with these tuberculous glands, in the majority the trouble was evidently dependent on infection from the tonsils, and in the others from the mucosæ opening on the face. Prophylaxis should therefore aim to keep these points in physiologic condition and to train the child to avoid contact with sources of infection. The glandular process once developed, the operation must be thoroughly radical, removing all the groups of glands that could be possibly involved. He uses Kocher's collar incision which is concealed by the collar later; the operation should be followed by thorough general treatment. The article is illustrated.

73. **Sterilizing Properties of Osmotic Currents.**—Holzinger describes experiments which show that bacteria are unable to proliferate in a culture medium in vessels subjected to osmotic currents. The osmotic currents are able to sterilize a culture medium containing bacteria but no albumin, the sterilization being complete in 48 hours and continuing as long as the osmosis proceeds with sufficient energy.

Correspondenz-Blatt für Schweizer Aerzte, Basle

January, XXXIX, No. 2, pp. 33-72

75 Results of Recent Research on Etiology and Diagnosis of Syphilis, Especially Serodiagnosis. W. Kolle.
76 *Stasis Cyanosis After Compression of Trunk. (Stauungsblutungen nach Compression des Rumpfes.) E. Ruppanner.

76. **Stasis Cyanosis After Compression of the Trunk.**—Ruppanner reports four cases from Wilms' clinic at Basle. Two of the patients were women injured during a theater panic and both, besides the stasis cyanosis, were unconscious for nearly twenty-four hours and neither had any remembrance of how they were injured. The swollen aspect and the cyanosis rapidly retrogress as a rule, and by the end of three or four weeks there is no trace of the injury except possibly the still bloodshot eyes. The prognosis is good in every respect except in regard to vision. Consecutive atrophy of the optic nerve has been reported in two cases and in Neck's case the hemorrhage in the macula became transformed into opaque patches. The parts of the skin showing the cyanotic patches are never tender, demonstrating that they are not the result of direct trauma. One surgeon supposed the cyanotic patient was asphyxiated and made ready for tracheotomy until the patient's tranquil breathing showed his mistake. The sharp limitation of the hemorrhagic infiltration and cyanosis below a circular line around the neck may erroneously suggest strangling. In some cases the symptoms may simulate fracture of the base of the skull, especially the suffusion in the conjunctivæ, and the discoloration of the lids, with the hemorrhages from nose, mouth and ears. He is inclined to explain the syndrome produced by compression of the trunk as the result of intense venous hyperemia with reflex closure of the glottis and tension of the abdominal walls, the latter increasing still more the pressure inside the abdomen and chest.

Deutsche medizinische Wochenschrift, Berlin

January 14, XXXV, No. 2, pp. 49-88

77 *Diagnosis and Treatment of Inoperable Gastric Carcinoma. (Diagnose und Behandlung des nicht operablen Magencarcinoms.) L. Kuttner.
78 *Removal of Middle Segment of Stomach on Account of Ulcer. (Entfernung des mittleren Abschnittes vom Magen wegen Geschwür.) Riedel. Commenced in No. 1.
79 *Indications for Spinal Anesthesia, Especially with Abdominal Operations. (Indikationsstellung zur Lumbalanästhesie.) E. Holländer.
80 *Progress in Treatment of Flatfoot Disturbances. (Behandlung der Insufficientia pedis.) A. Schanz.
81 Treatment of Skin Affections with the Quartz Lamp. (Behandlung von Hautkrankheiten mit der Kromayerschen Quarzlampe.) F. Bering.

82 Explanation of Early Reaction After Roentgen-Ray Treatment. (Zur Aetiologie der Frühreaktion nach Röntgenbestrahlung.) H. E. Schmidt.

83 Medication by Inhalation. (Zur Inhalationstherapie.) M. Lubinski.

84 *Treatment of Pertussis. (Zur Therapie des Keuchhustens.) Senftleben.

85 Historical Development of Pharmacotherapy. H. Schulz. Commenced in No. 1.

77. **Diagnosis and Treatment of Gastric Cancer.**—Kuttner calls attention to the onset of the stomach affection as instructive regarding its malignant or non-malignant nature. In all his experience he has known of only three cases in which profuse hematemesis was the initial symptom; in the others there was always a history of acute dyspepsia or chronic gastric catarrh rebellious to ordinary measures. At the same time, he remarks, there is very little danger that a non-malignant chronic gastric catarrh or achylia will become transformed later into a malignant neoplasm. He has encountered only four cases in which years of achylia had preceded the development of cancer. On the other hand, it is a comparatively frequent experience to encounter cancer in patients with a history of gastric ulcer immediately preceding, or with even a long interval of apparent health. Loss of appetite is an instructive symptom of cancer, especially when there is pronounced repugnance to meat. The age is less important for the diagnosis than hitherto assumed; the wider his experience, the larger the number of youthful patients discovered to have cancer—their youth preventing the correct diagnosis in many cases. A family tendency is also an aid to the diagnosis, as also the displacement of the tumor when the stomach is inflated with air, the peristaltic and antiperistaltic movements in the stomach and occult blood in stomach content or stool. The lack of hydrochloric acid and the presence of lactic acid are not specific for cancer but if with lack of hydrochloric acid and good motor functioning no occult blood can be detected in stomach content or stool on repeated examination this is presumptive evidence against the probability of cancer in dubious cases. Left pleuritis of otherwise unexplained origin should suggest the possibility of carcinoma of the lesser curvature. Small scraps of ice or ice-cold water or champagne are useful in case of vomiting, or from 2 to 5 drops of chloroform on ice, or morphin. If the vomiting persists, great relief may be obtained by rinsing out the stomach, possibly using some disinfectant in the water if there is much fermentation. Saline purgatives should be strictly avoided, and rhubarb or cascara used when enemas fail. In diarrhea, lavage of the stomach generally gives relief or bismuth, opium, etc., may be found necessary.

78. **Removal of Middle Segment of Stomach for Ulcer.**—Riedel states that he has performed this operation on 23 patients, with 26 per cent. mortality. On the other hand, none of his patients died in the series of cases in which the operation was restricted to restoring the communication between the cardia and pylorus or to gastroenterostomy. At the same time he regards this resection of the middle segment of the stomach as the operation of the future as all other technics give uncertain results while this restores comparatively normal conditions. The stomach is a little shortened but otherwise it retains its normal shape and it functionates normally. Surgeons have hitherto been more interested in ulcers in the pyloric region as these entail stenosis, but he declares that the callous ulcers which develop in the middle section of the stomach deserve attention fully as much. In his experience they are almost as frequent as the pyloric ulcers—2 to 3—and although the callous ulcer is apparently small yet it destroys the stomach wall very extensively, thus seriously altering its shape. As the ulcer in the middle segment is to the left of the median line, pain from an ulcer in this section is felt under the left costal arch or at the back on the left. As hematemesis does not occur in more than half the cases, this pain and increasing loss of weight are the only signs of the trouble until a tumor becomes palpable. Internal treatment must be exhausted, of course, before surgical measures are contemplated, especially as an ulcer in the mucosa will heal under these measures, but they have no effect on the callous ulcer. Mere excision or gastroenterostomy gives unsatisfactory results as such an extent of stomach wall has been injured by the encroaching ulcer that even approximately normal conditions can not be restored. The proper treatment is to cut out completely the segment involved and suture the parallel edges of the stumps together. His experience shows that this is a comparatively simple and harmless operation, but that it should not be attempted on patients suffering from concomitant heart or lung affections.

79. **Spinal Anesthesia and Its Indications.**—Holländer protests against the way in which surgeons seem to be turning aside from spinal anesthesia. It never fails for operations on the legs, but he prefers local anesthesia for these, except for elderly, decrepit patients. For affections of the abdomen and trunk, especially those with suppuration, requiring tedious operations, the patients generally being much debilitated, spinal anesthesia offers peculiar advantages, not the least among them being the lesser liability to postoperative atony of the bowel. It has been his experience that patients who have had operations done under various technics prefer the spinal method, not minding the retention of consciousness. It sometimes proves a direct aid during the work as the patient can be asked to strain, cough, etc. On the other hand, the surgeon would be much hampered by it in case of an unexpected hemorrhage or other mishap. The fact that there need be no fear of transient postoperative paralysis of the intestines frequently turns the scale in favor of the spinal technic. The addition of adrenalin to the fluid injected causes increased tonicity in the intestines; they look as if they had been lying for a time in formalin. The tonus may even become excessive and peristalsis so vigorous that the intestine may simulate a tumor. This stiffness and prominence of the intestines is a great help in operating and it promotes uneventful healing. In 19 cases of appendicitis in which the operation was done under spinal anesthesia, the condition afterward compared most favorably with that of patients operated on by the usual inhalation technic. He has performed forty-one other abdominal operations with the spinal technic and prompt recovery, including operations on the stomach, pancreas, kidney, gall bladder and intestines besides operations on the uterus and ovaries. In another case a much debilitated woman with a carcinoma in the rectum involving also vagina and uterus was operated on as the large neoplasm was movable. It was removed by the abdominal route under spinal anesthesia, the operation lasting two and a half hours. The woman seemed better after than before the operation; there was no collapse, but she succumbed later to sepsis from gangrene of the sigmoid flexure which had been sutured to the anus.

80. **Treatment of Flatfoot.**—Schanz calls attention to the fact, which has been generally overlooked hitherto, that the arch of the foot is a transverse as well as a longitudinal arch. The transverse mechanism may be out of gear without disturbance of the longitudinal or both may be involved. This is the explanation of the persistence of symptoms after correction of flatfoot: the transverse arch has not been corrected with the longitudinal. The disturbances in the transverse arch are experienced in the front part of the foot and it spreads out abnormally wide; between the ball of the big toe and the ball of the little toe the distance is over a quarter of an inch wider than in the other foot. By strapping the foot with adhesive plaster to bend it into proper shape to restore the transverse arch, all disturbances vanish. He prefers for the purpose a strip of cotton flannel and Finck's glue. This makes a plaster that fits better and is more easily removed. The glue is made of 7 parts Venice turpentine; 6 parts mastic; 12 parts colophony; 4 parts white resin, and 90 parts 90 per cent. alcohol, mixed and filtered. A thin layer of this mucilage is spread over the foot, and the fuzzy side of the cotton flannel adheres firmly to it. He regards this combination of glue and cotton flannel as a marked advance in the technic of such dressings. He also gives an illustrated description of a durable leather device to wear to sustain both the longitudinal and the transverse arch.

84. **Treatment of Whooping Cough.**—Senftleben thinks that quinin and antipyrin can be depended on to abort or attenuate pertussis, but that, as usually given, the dislike of the child to take medicine leads to inadequate dosage or to its total neglect. This can be obviated by injecting a solution of the drug into the rectum. The solubility of the antipyrin commends it for the purpose, and he has 1 gm. (15 grains) dissolved in 25 gm. warm water, injected three times a day, for a child over 12, with smaller doses for younger children. He has never noticed any ill effects on the heart, while, when the injections are commenced early, the disease is frequently aborted. It does not depress the appetite given in this way, and the therapeutic effect sems to be constant and reliable.

Medizinische Klinik, Berlin

January 19, V, No. 2, pp. 41-78

86 *Diagnosis of Abdominal Affections. (Zur abdominalen Diagnostik.) R. Schmidt.
87 Modern Care of Puerperæ. (Erfahrungen mit moderner Wochenpflege.) E. Opitz. Commenced in No. 1.
88 Clinical Importance of Tryptic Ferments and Their Antibodies. (Die klinische Bedeutung der tryptischen Fermente und ihrer Antikörper.) G. von Bergmann.
89 Etiology of Perverse Sexual Impulses. (Zur Aetiologie der konträren Sexualempfindung.) J. Sadger.
90 Advantages of Soap Suppositories in Appendicitis. (Seifenzäpfchen bei Perityphilitis.) W. Zenner.
91 Relation of Dermatology to General Medicine. Wolters. Commenced in No. 1.

86. **Abdominal Diagnosis.**—Schmidt gives a long list of points useful in the diagnosis of abdominal affections, citing cases from his experience to sustain his statements. In one case a man of 62 with symptoms of cirrhosis of the liver was auscultated and a distinct systolic murmur was heard, most marked over the right lobe. This strictly systolic murmur over the liver differentiated at once carcinomatous infiltration, confirmed by autopsy. In this last case the murmur disappeared after a time, probably from complete obliteration of an afferent artery. These systolic murmurs may also be observed in cancer of the stomach and pancreas, evidently being the result of compression of some artery. The murmur is most pronounced at the end of expiration. The splashing sound in the intestine is as instructive as in the stomach. Instead of the usual means of eliciting it, he advises the technic as for Hippocrates' test for pneumothorax, substituting the pelvis for the shoulder. Friction sounds are very instructive, showing inflammation around the organ which may yield promptly to local revulsion. Friction sounds are very important as the first symptom of incipient tuberculous peritonitis, before ascites has developed. He remarks that when the abdominal reflexes are very active, inflammatory processes in the abdomen may be excluded, as a rule, the assumption of neurogenic disturbances being more plausible. The palpation findings are usually more instructive in the morning than in the afternoon, when there are apt to be gases in the stomach and intestines. He warns that a tumor may be movable when the patient breathes with the diaphragm, while the same tumor with purely costal breathing does not move at all. To insure that the patient breathes with his diaphragm he lays one hand on the epigastrium and tells the patient to inspire until the hand is lifted. Schmidt regards the diazo reaction as extremely important in the diagnosis of tuberculous peritonitis. It never occurs in such pronounced form in other affections; the findings were always negative in his cases of cirrhosis. Ehrlich's aldehyd reaction is instructive in regard to disturbances in the liver. The findings are almost always positive with diffuse cirrhotic processes and acute congestive liver and at the beginning and end of catarrhal jaundice, but it is seldom observed in cancer or in typhoid. In one case lactic acid bacilli could be cultivated from the stool, but not from the vomit, and he diagnosed a lymphosarcoma in the small intestine, confirmed by autopsy. The small intestine had enlarged to form almost a second stomach. A tuberculous stricture in the small intestine may also give this finding of lactic acid bacilli exclusively in the stool. The addition of blood to the culture medium promotes the growth of the bacilli. In case of a cirrhous, diffuse, infiltrating carcinoma in the stomach, the vegetation is more of a colon bacillus type. Sarcinæ in the stomach content or stool indicate stenosis at the pylorus. In one case, the diagnosis of a neoplasm in the kidney seemed unmistakable, but he differentiated a gastric cancer on account of the number of sarcinæ in the stool and the fact that the violent pains were promptly abolished by anesthesin. This diagnosis was also confirmed by autopsy. Vegetation of Gram-positive anaërobics of the pseudocolon bacillus type is found in many cases of achylia and intestinal fermentative dyspepsia, but such patients are almost invariably young neuropathics. It may be regarded as a stigma of the neuropathic condition. He has never found the leptrothrix in malignant intestinal processes. In conclusion, he remarks that there are plenty of means to differentiate affections in the abdomen without inflicting the disagreeable test diet on patients, the power of digestion varying within such wide range at different times in the same individual and especially under the influence of emotions, that the findings are often actually misleading.

Münchener medizinische Wochenschrift

January 12, LVI, No. 2, pp. 57-112

92 *Latent Proliferation of Typhoid Bacilli. (Ueber den latenten Mikrobismus der Typhusbazillen.) M. Lüdke.
93 Serodiagnosis in Syphilis and Other Infectious Diseases. (Die Wassermannsche Serореaktion bei Lues und anderen Infektionskrankheiten.) F. Rolly.
94 Fat-Splitting Ferment in the Lymphocytes. (Fettspaltendes Ferment in den Lymphozyten.) S. Bergel.
95 *External Version. (Die äussere Wendung.) A. Labhardt.
96 Sterilization and Use of Rubber Gloves. (Zur Sterilisation und Verwendung der Gummihandschuhe.) Heye.
97 Determination of Antigens in Complement Fixation in Tuberculosis. (Nachweis der Antigene bei der Komplementablenkung der Tuberkulose.) J. Bauer.
98 Fibrinous Stomatitis from Pneumococcus Infection. (Ueber fibrinöse Schleimhautentzündung durch Pneumokokkeninfektion.) Mann.
99 Electroscope for Urethra and Bladder. (Ein Spezialelektroskop für Urethroskopie und direkte Kystoskopie.) W. Brünings.
100 Origin of Concrements. (Zur Konkrementbildung.) H. Schade. Commenced in No. 1.
101 *Prevention, Treatment and Forensic Importance of Injuries from Roentgen Rays. (Die Schädigungen, welche durch Röntgenstrahlen hervorgerufen werden.) H. Gocht. Commenced in No. 1.
102 How the Practitioner Can Promote Breast Nursing. (Was kann der praktische Arzt zur Verbreitung des Selbststillens tun?) Vidal.

92. **Latent Typhoid Bacilli in the Organism.**—Lüdke reports extensive experimental research which shows that virulent typhoid germs may be lurking in the spleen and bone marrow when the blood is sterile. His research further throws light on the question of immunity as he found that the agglutinating power increased in inverse proportion to the number of bacilli in the blood. It seems probable that the germs lose most of their virulence when they are located in the tissues, but that they regain virulence as they enter the circulating blood which apparently is a peculiarly favorable culture medium.

95. **External Version.**—Labhardt writes from von Herff's clinic at Basle to describe the indications for external version accepted there and 63 cases in which it was done. This represents only 28 per cent. of the 225 cases of transverse presentation encountered during the last seven years. Only 2 of the women were primiparæ. Excluding 3 cases of extragenital morbidity, there were only 7 or 11 per cent., in which there was fever—a remarkably low percentage when it is considered that external version is applied only in pathologic deliveries. If the transverse presentation can be changed to a head presentation by external version, this is an extraordinary gain for both mother and child; if it can be merely changed to a breech, this is no special advantage for the child, but it spares the mother intrauterine maneuvers, and this is likewise great gain for the mother. Forty-seven out of 51 children were delivered alive by head presentation and 9 out of 12 with breech presentation. In only one instance was the version possibly responsible for the death of the fetus by prolapse of the cord. In one case the asphyxia of the child was due to the funnel-shaped pelvis.

101. **Injuries from the Roentgen Rays.**—Gocht emphasizes the importance of avoidance of the rays and of every possible source of mechanical irritation in case of signs of an *x*-ray dermatitis, even too frequent washing. Plaster of Paris is po-

culiarly harmful in this respect. Cold water has always been more satisfactory than warm, especially cold sea water. Court plaster protects, keeps out the air and shuts in the moisture, and has proved very useful in his experience. Cocain and other solutions which have a paralyzing action on the vessels should be scrupulously avoided, but a combination of sulphur and tar in the form of an unguent is easily applied with a broad brush and is very soothing and healing. He advises mechanical removal of all warty, horny protuberances, and excision of large ulcerating areas, suturing afterward or covering with Thiersch flaps. If the burn is near a joint, care must be taken not to allow the development of contractures. His experience as expert in five damage suits brought on account of injury from the therapeutic application of the *x*-rays, impels him to urge physicians to extreme care in protection, dosage and precautions of all kinds, and that they should inform the patients beforehand of the possibility of overdosage even under every precaution. They should also inquire if the patient has had any experience before with Roentgen exposures and whether he is specially susceptible to the *x*-rays. The physician is occasionally reproached for leaving the room for a short time during the exposure, but it must be distinctly understood that this does not imply neglect on his part, as the apparatus and tubes now used work with sufficient regularity for the short period of exposure. In Roentgen damage suits, the experts called on to testify should be Roentgen specialists, or at least have had considerable experience with Roentgen work and the biologic properties of the rays. Injuries from *x*-ray exposures are growing constantly rarer; the main contingent of the sufferers are the mechanics, physicians and their assistants who are interested in perfecting the science of Roentgenology.

Wiener klinische Wochenschrift

January 7, XXII, No. 1, pp. 1-42

103 Serpiginous Corneal Ulcer. (Ulcus serpens corneæ.) E. Fuchs.
104 Pernicious Anemia from the Distoma. A. Gluzinski.
105 Serotherapy of Puerperal Process. (Versuche mit Rekonvaleszentenserum.) T. Meissl.
106 Body Temperature After Injection and Reinjection of Allen Serum. H. Pfeiffer.
107 Spondylitis and Lumbar Hernia. A. Saxl.
108 Physicians at Health Resorts. (Beziehungen der balneologischen Wissenschaft und kurärztlichen Tätigkeit zur Prosperität der Kurorte.) L. Wick.

January 14, No. 2, pp. 43-78

109 Present Status of Etiologic Diagnosis and Antitoxic Treatment of Asiatic Cholera. R. Kraus.
110 Behavior of Cholera Stools in Precipitin Tests. (Verhalten der Cholerastühle gegenüber Serum- und Kotpräzipitin.) R. Kraus and M. Wilenko.
111 Relations of Putrefaction in Intestines to Exclusion of Bile from Intestine. (Beziehungen der Darmfäulnis zum Gallenabschlusse vom Darme.) A. Rodella.
112 *Internal Chloroform Intoxication and Its Treatment. (Interne Chloroformvergiftung und ihre Therapie.) K. Wirth.
113 *Postoperative Parotitis. F. Orthner.
114 *Foreign Bodies in Heart. (Fremdkörper im Herzen.) R. T. Schwarzwald. Commenced in No. 1.

112. Internal Intoxication with Chloroform and Its Treatment.—Wirth has encountered two cases of intoxication with chloroform, although only 30 such cases seem to have been reported in the literature. His first patient was a young man who drank 150 gm. (5 ounces) of pure chloroform with suicidal intent. Notwithstanding rinsing of the stomach with water and milk, saline infusion, etc., enough chloroform remained to prove fatal and the patient died in twenty-two hours without recovering consciousness. The fact that chloroform does not dissolve readily in water and sinks to the bottom suggested that better results might be obtained by rinsing the stomach with oil, and he soon had an occasion to verify this assumption. A man of 43 drank from 80 to 90 gm. chloroform as a cure for sleeplessness, and Wirth rinsed out the stomach with warm sesame oil, as this was first at hand, and then rinsed with olive oil until there was no odor of chloroform in the stomach content. He thus used up 7,000 c.c. of oil, the lavage continued for one and a half hours. On account of asphyxia, artificial respiration had to be done for a time, interrupting the lavage. Venesection, withdrawing 300 c.c of blood was followed by saline infusion, and in 24 hours the patient was himself again except for a slight headache. He did not seem to suffer from the usual chloroform irritation of the digestive tract. The favorable termination in this case is undoubtedly to be ascribed, Wirth declares, to the thorough washing out of the stomach with the warm oil until the last trace of chloroform had been removed.

113. Postoperative Parotitis.—Orthner calls attention to the large proportion of cases in which postoperative parotitis followed an ovariotomy. The temperature will show whether the parotitis is a manifestation of severe general pyemic or septic infection; if the temperature is normal there is no need for alarm. In his three cases the parotitis developed after ovariotomy, and lasted for weeks before all the objective and subjective symptoms had vanished, but there were no complications. The depressing effect of the parotitis as the patients are recovering and appetite is returning, is the most unpleasant feature of this complication, with the disfigurement and incessant pain.

114. Foreign Bodies in the Heart.—Schwarzwald reviews various cases on record of migrating foreign bodies finding their way into the heart. In a personal case described a needle had passed through the heart and several needles were found in the abdominal wall or near the sternum. The needle in the heart must have worked its way into the pulmonary artery. The case is unique, in that the foreign body must have passed completely through the heart. He assumes that the needles made their way through the front of the chest or abdomen, although nothing was known to explain the occurrence. Death was sudden, with no prodrome.

Zentralblatt für Chirurgie, Leipsic

January 13, XXXVI, No. 3, pp. 73-104

115 *Antiferment Treatment of Suppurative Processes with Concentrated Animal Antiferment Serum. (Antifermentbehandlung eitriger Prozesse mit hochwertigem tierischem Antifermentserum.) E. Müller.
116 *Extension by Transverse Nail. (Extension am querdurchnagelten Knochen.) Wilms.

115. See abstract No. 79, in THE JOURNAL, February 6, 1909, page 516.

116. Extension by Nail Driven Through the Bone.—Wilms uses a nail shaped something like a chisel, and has never had any mishaps with it, but has always found it extremely useful and reliable for extension after reduction of fractures. For the arm or leg he drives the nail only through the tibia or radius alone, not through both bones. The tip of the nail protrudes beyond the skin and has an eye in which the wire is fastened for the extension. He has applied this nail technic in thirteen cases; it is especially useful in case of T fracture of the humerus.

Zentralblatt für Gynäkologie, Leipsic

January 16, XXXIII, No. 3, pp. 73-120

117 *What Does Modern Therapy of Placenta Prævia Accomplish? (Was leistet die moderne Therapie bei der Placenta prævia?) W. Hannes.
118 *Serodiagnosis of Syphilis in Obstetrics. (Zur serodiagnostik der Lues in der Geburtshilfe.) Engelmann.
119 Ophthalmia in the New-born and Silver Acetate. (Die Ophthalmoblennorrhoea und das Argentum acetic.) E. Scipiades.
120 Forceps for High Breech Extraction. (Extraktion des hochstehenden Steisses mit meiner Steisszange.) K. Eisenstein.
121 *Treatment of Abortion. (Zur Abortbehandlung.) S. Chazan.

117. Treatment of Placenta Prævia.—Hannes relates the experiences with placenta prævia at Küstner's clinic at Breslau, a total of 246 cases. The maternal mortality was 6.6 per cent., and this mortality would have been much reduced if the inflatable bag, which is the main reliance in treatment of placenta prævia, had been applied earlier. The 8 deaths among the 143 women treated with the hystereurynter were not connected with the use of the bag in any way. If it had been used in more cases and earlier, there would have been fewer deaths from anemia, he is convinced. Of the 147 viable children, 70 per cent. left the hospital in good condition and 75 per cent. in the 132 cases in which the hystereurynter had been used. He urges that the old method of version, with its fetal mortality of 75 or 80 per cent., should be discarded for the hystereurynter with 75 to 80 per cent. living children. Every woman with placenta prævia should be placed in the hands of an expert at the earliest possible moment but every

practitioner should be an expert in the use of the hystereurynter.

118. **Serodiagnosis of Syphilis in Obstetrics.**—Engelmann calls attention to the necessity of regarding the widow of a syphilitic as infected even although she may be married to a healthy man and be apparently healthy herself. In a recent case in his experience the widow after her marriage to a healthy second husband gave birth to two children with the stigmata of inherited syphilis. The specific serореaction after the birth of the second syphilitic child was pronounced. Specific treatment was instituted at once, and the woman's latent syphilis seems now to have been cured. He remarks that such cases sustain the assumption that inherited syphilis is always derived from the mother. The serodiagnosis seems to be able to reveal the latent syphilis and thus to permit a cure before irreparable damage has been done to the offspring—if only the possibility of syphilis is borne in mind. This is particularly important for the apparently healthy widows of known syphilitics.

121. **Treatment of Abortion.**—Chazan advocates the curette for old cases, but warns most energetically against it for recent cases of abortion. For years he has emptied the uterus by the hand alone each year in an average of 100 cases of recent abortion, and without a single mishap of any kind.

Gazzetta degli Ospedali e delle Cliniche, Milan

December 27, XXIX, No. 155, pp. 1661-1676

122 Wedge Resection of Tuberculous Knee. (Resezione cuneiforme del ginocchio a scopo curativo e ortopedico in processo tubercolare.) G. Moroni.

123 Antagonistic Action of Pancreas Extract to Suprarenal Extract. (Sul potere antiadrenalinico dell'estratto pancreatico.) G. Ghedini.

December 29, No. 156, pp. 1677-1684

124 Symptomatology of Tuberculin Reactions. (Semeiologia delle reazioni tubercoliniche.) G. Massini.

125 Sensitizer in Serum in Chorea. (Sulla presenza di sensibilizzatrici nel siero di sangue di coreici.) E. Calcaterra.

January 3, XXX, No. 1, pp. 1-16

126 Operative Treatment of Intestinal Occlusion. A. Montini.

January 7, No. 3, pp. 25-32

127 Operative Treatment of Chronic Endometritis. P. Romeo.

January 10, No. 4, pp. 33-48

128 Subcutaneous Administration of Purgatives. (Dei purganti per via ipodermica.) C. Nicolini.

Policlinico, Rome

January 3, XVI, Practical Section, No. 1, pp. 1-36

129 Hemolytic Jaundice. (Itteri emolitici.) G. Basile.

130 *Salt in Prophylaxis of Ankylostomiasis. (Nuovo metodo di profilassi contro l'anchilostomiasi.) M. Chiadini.

January 10, No. 2, pp. 37-68

131 Arterial Pressure in the Tuberculous in Relation to Development of the Circulation Center and of the Nervous System. A. Nardi. Commenced in No. 1.

January 17, No. 3, pp. 69-100

132 Reparative Processes in the Ovary After Resection. (Sui processi di riparazione dell'ovaio consecutivi alla resezione.) S. Turretta.

133 *Meningitic Syndrome in Pernicious Malaria. G. Vitello.

130. **Salt in Prophylaxis of Miner's Anemia.**—The results of Chiadini's research have confirmed the prophylactic influence of saline water in mines. The mines with salt springs seem to be entirely free from the hookworm. These immune mines have a proportion of at least 2 per cent. of salt in the water. Miners coming from infested mines never cause an outbreak of ankylostomiasis in these mines. By artificially rendering the water in the mines saline it may prove possible to eradicate hookworm disease in endemic foci.

133. **Meningitis Syndrome in Pernicious Malaria.**—Vitello's two little patients lived in a malarial district and the fever in each case was intermittent, but all the other features of the sickness suggested both cerebral and spinal meningitis, especially the Kernig sign, contraction of the neck and trismus. He recalled to mind Capozzi's remark that malaria is the most industrious simulator of all kinds of affections, and gave quinin, with prompt and satisfactory results. The meningeal symptoms grew more intense with the onset of each febrile paroxysm, and they displayed no regular sequence as in true meningitis. It seems evident, he says, that the meningeal symptoms were due to disturbances in the circulation in the meninges, not to actual inflammation.

Riforma Medica, Naples

January 4, XXV, No. 1, pp. 1-28

134 Diagnosis of Tumors at the Base of the Brain. (Tumori della base dell'encefalo.) G. Rummo.

135 Primary Syphilitic Polyneuritis in Tertiary Period. C. Frugoni.

Hospitalstidende, Copenhagen

December 2, LI, No. 49, pp. 1369-1392

136 *Astereognosis. K. Malling.

December 9, No. 50, pp. 1393-1416

137 *Roentgen-Ray Treatment of Exophthalmic Goiter. (Om Röntgenbehandling af Morbus Basedowii.) G. Jørgensen.

December 23, No. 52, pp. 1441-1480

138 New Feature of Visual Field in Glaucoma. (En ny Egenskab hos Glaukomsynsfeltet.) H. Ronne.

December 30, No. 53, pp. 1481-1496

139 *Paraffin Prothesis. V. S. Stein.

January 6, LII, No. 1, pp. 1-32

140 Diagnosis of Erysipelas. Sørensen.

136. **Astereognosis.**—Malling has been making a special study of loss of the power to recognize the shape of objects by touch. He has examined sixteen patients with various nervous affections, and describes three cases in which the astereognosis was pronounced. His experience shows that it has no clinical value as a sign of the localization of a brain lesion in or below the cortex. Also that there is no evidence in favor of the assumption of a special center for this sense. It is rather the result of an associative psychic process composed of elements derived from the simple qualities of the sense of touch.

137. **Roentgen Treatment of Exophthalmic Goiter.**—Jørgensen reports seventeen cases of exophthalmic goiter in which a systematic course of Roentgen treatment was instituted. In only two instances did the thyroid show any sign of decreasing in size, and none of the symptoms was improved in any patient to an extent to justify the assumption of any direct curative action. Some of the patients found the nervous symptoms improve somewhat and they gained a little in weight, but this occurs almost always when such patients are admitted to the hospital. He concludes by urging prompt resort to the surgeon when the exophthalmic goiter does not improve under hygienic-dietetic measures.

139. **Paraffin Prothesis.**—Stein here reports considerable research on the best technic for paraffin prothesis, the results confirming the reliability of the method for determining the boiling point by taking up a wire loopful of the paraffin and holding it in a goblet of water in which stands a thermometer and gradually heating until the paraffin begins to melt around the edges of the loop. He rejects all mixtures of the paraffin with vaselin, as it is difficult to estimate correctly the melting point of the mixture. The melting point, he thinks, should be considerably below 50 C.

Ugeskrift for Læger, Copenhagen

November 19, LXX, No. 47, pp. 1335-1366

141 *Decapsulation of Kidneys in Eclampsia. E. Müller. Commenced in No. 46.

December 3, No. 49, pp. 1401-1438

142 *Cardiospasm. K. Petersen.

January 7, LXXI, No. 1, pp. 1-55

143 *Bloch-Verdin's Sphygmometer. H. Jansen and O. Petersen.

January 14, No. 2, pp. 33-56

144 *Physiologic Action of Roentgen Rays. (Röntgenstraalernes fysiologiske Virkninger.) J. F. Fischer.

141. **Decapsulation of the Kidneys in Eclampsia.**—Müller describes a case in which the convulsions persisted after delivery of a living child six weeks before term. On account of the persisting hemorrhage the placenta was removed by hand, but the coma persisted with occasional convulsions and turbid urine with 1 per cent. albumin. Under a little ether, decapsulation of both kidneys was done the day after delivery, as the patient seemed to be moribund. Improvement was soon perceptible and no convulsions occurred after the operation, while diuresis rapidly increased and recovery was soon complete. He summarizes the details of 23 other cases from the literature, and shows in the 8 fatalities that in scarcely any instance could the decapsulation have been incriminated. In one of these cases the decapsulation was not done until the

patient had lain in coma for several days after delivery, and in another not until after nearly five days of total anuria. Müller has had seventeen cases of puerperal eclampsia in his experience, and nephritis was evident in all. Most of the patients left the hospital with the nephritis still persisting, but in one case the kidneys were apparently restored to normal. Four of the five women with eclampsia after induced abortion recovered as soon as the uterus had been emptied. In all the cases on record the prompt re-establishment of diuresis was noticeable, he says.

142. **Cardiospasm.**—Petersen reports three cases which show the necessity for discrimination in treatment. One patient was a girl of 15 with severe disturbances from cardiospasm, although the esophagoscope revealed nothing abnormal. Belladonna and bromids, with dietetic measures to combat the hyperacidity, soon restored conditions to normal. Another patient was a man of 42, and he was cured by feeding through a sound and dilatation of the cardia with Geissler's sound. The third patient was a young domestic, and a cure was obtained only by a laparotomy with forcible dilatation of the cardia with the finger. This is the first operative case of the kind that has been reported in Denmark.

143. **Bloch-Verdin Sphygmometer.**—Jansen and Petersen give an illustrated description of this simple little instrument, which is a modification of the Basch sphygmomanometer, and relate clinical experiences. It does not pretend to be an instrument of precision, but it allows oversight of the conditions sufficient for all ordinary clinical purposes. It takes the place in measurement of the blood pressure of Tallquist's hemoglobinometer for estimation of the percentage of hemoglobin—being sufficiently exact for the desired purpose.

144. **Physiologic Action of Roentgen Rays.**—Fischer discusses the local action of the rays on the skin, and internal organs and their property of inhibiting growth. Experience has demonstrated that the rays act first and predominantly on the spleen, lymph glands and bone marrow and on the epithelium of the testicles, ovaries and skin, but that no tissue escapes their influence. It is only a question of greater or less resistance on the part of the different tissues. The intensity of the reaction depends entirely on the amount of radio-units absorbed. The cell elements are the point of attack, and the reaction is strongest at the points where cell multiplication is proceeding most actively. The younger the cell, the greater the influence of the rays; the reaction may be so intense that mitosis is arrested.

Upsala Läkareförenings Förhandlingar

December, XIV, No. 2, pp. 107-204

145 *Primary Cancer in the Appendix. (Om primär kancer i processus vermiformis.) V. Wahlgren.
146 *Spinal anesthesia. (Om subarachnoidal anestesi.) F. Zachrisson. Commenced in No. 1.
147 Infectious Processes in Abdomen Originating in the Stomach.) (Några ord om infektiösa processer i bukhålan utgångna från ventrikeln.) K. Dahlgren.
148 Experiences with Spinal Anesthesia at Upsala. (Subarachnoidalanestesien vid kir. kliniken i Upsala, 05-07.) L. Bergström.
149 Sensibility of the Viscera. (Kritiken af Lennanders arbeten om känseln i bukhålan.) G. Nyström.
150 Dicalcic Phosphate as Sediment in Urine. (Om dikalciumfosfat som sediment i urin.) C. T. Mörner.
151 *Diagnosis of Tuberculosis of the Kidneys. (Om njurttuberkulosens diagnostik.) G. Ekehorn.

145. **Primary Cancer of the Appendix.**—Wahlgren adds another to the 72 cases on record and comments on the usually favorable prognosis. In 23 of the 25 operative cases collected by Zaaijer there has been no recurrence during the interval since. Wahlgren's patient was a girl of 15, and the operation was done two weeks after the first signs of pain, which gradually became localized in the right iliac fossa. She is in good health nearly three years after the operation. The details of the 72 cases are given in turn.

146. **Spinal Anesthesia.**—This article is the work of the late Professor Lennander, although completed by Zachrisson. It concludes with a quotation from THE JOURNAL, saying that the ideal anesthetic will abolish pain by the abolishment of consciousness, but without danger to life. He adds that spinal anesthesia does not fulfil these conditions.

151. **Diagnosis of Kidney Tuberculosis.**—In this thesis Ekehorn reviews his extensive experience with tuberculous processes in the kidneys, and asserts that he regards it as a duty for every practitioner to be able to diagnose tuberculosis in the urinary apparatus. It does not require specialist skill. He refers to his method of centrifugalizing and contrast staining with carbol fuchsin and malachite green, described in detail in THE JOURNAL, February 13, page 691. Catheterization of the ureter is indispensable in every case of suspected tuberculosis of the kidney, always on the sound side if only one ureter is catheterized; it is sometimes impossible to introduce the catheter into the diseased ureter. He emphasizes the fact that no one has any right to remove the diseased kidney without knowledge of the conditions in its mate. The results of nephrectomy in tuberculosis have been very satisfactory. The results are better, of course, the earlier it is done; the secondary bladder process generally soon heals.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

RETINITIS PIGMENTOSA. With an Analysis of Seventeen Cases occurring in Deaf Mutes. An Essay Awarded the Alvarenga Prize of the College of Physicians of Philadelphia, July, 1908. By William T. Shoemaker, M.D., Philadelphia. Laboratory Examinations of the Blood and Urine by John M. Swan, M.D., Philadelphia. Cloth. Pp. 106, with illustrations. Price $2. Philadelphia: J. B. Lippincott Co.

SEVEN HUNDRED SURGICAL SUGGESTIONS. Practical Brevities in Surgical Diagnosis and Treatment. By Walter M. Brickner, B.S., M.D., Assistant Adjunct Surgeon, Mount Sinai Hospital, New York, Eli Moschcowitz, A.B., M.D., Assistant Physician, Mount Sinai Hospital Dispensary, New York, and Harold M. Hays, M.A., M.D. Third Series. Cloth. Pp. 133. Price $1. New York: Surgery Publishing Co., 1909.

HEMATOLOGICAL ATLAS. With a Description of the Technic of Blood Examination. By Karl Schleip, M.D., Scientific Assistant in the Medical Clinic University of Freiburg. English Adaptation of Text by Frederic E. Sondern, M.D., Professor of Clinical Pathology New York Postgraduate Medical School and Hospital. Half Leather. Pp. 256, with illustrations. Price, $10. New York: Rebman Co.

SOURED MILK AND PURE CULTURES OF LACTIC ACID BACILLI IN THE TREATMENT OF DISEASE. By George Herschell, M.D., Lond., Fellow of the Royal Society of Medicine. Cloth. Pp. 32, with illustrations. Price 1 shilling 6 pence. London: Henry J. Glaisher. Chicago: W. T. Keener & Co., 1909.

PHYSICAL DIAGNOSIS AND LABORATORY DIAGNOSIS. By Henry P. Kohlberger, Ph.B., M.D., Associate Professor of Medicine and Director of Clinical Laboratory, University of Pittsburgh (Med. Dept.) Flexible Leather. Pp. 155. Price $1. Pittsburgh: Medical Abstract Publishing Co.

CHILDREN WHO NEED NOT HAVE BEEN BLIND; PREVENTION A PUBLIC DUTY. (Prevention of Blindness No. 2). January, 1909. Paper. Pp. 39, with illustrations. New York: Special Committee on Prevention of Blindness of the New York Association for the Blind, 289 Fourth Ave.

OBSTETRICS IN ABSTRACT. By William D. Ingils, A.M., M.D., Professor of Obstetrics in the Starling-Ohio Medical College. Flexible Leather. Pp. 171. Price $1. Pittsburgh: Medical Abstract Publishing Co.

REPORT OF THE CONNECTICUT AGRICULTURAL EXPERIMENTAL STATION. FOOD PRODUCTS. 1908. (By John Phillips Street). Being Part IX of the Biennial Report of 1907-1908. Paper. Pp. 716.

THE DEVELOPMENT OF THE CHICK. By Frank R. Lillie, Professor in the University of Chicago. Cloth. Pp. 472, with illustrations. Price $4. New York: Henry Holt & Co., 1908.

WANDLUNGEN DER MEDIZIN UND DES AERZTESTANDES IN DEN LETZTEN 50 JAHREN. Von O. von Bollinger. Paper. Pp. 44. Price, 1 mark. München: J. F. Lehmanns Verlag, 1909.

HANDBUCH DER BIOCHEMIE DES MENSCHEN UND DER TIERE. Von Carl Oppenheimer, Berlin. Installments 8, 9 and 10. Paper. Price, 5 marks each. Jena: Verlag von Gustav Fischer.

TRANSACTIONS OF THE AMERICAN CLIMATOLOGICAL ASSOCIATION. For the Year 1908, Vol. XXIV. Cloth. Pp. 290, with illustrations. Philadelphia: Printed for the Association, 1908.

PUBLICATIONS OF THE MASSACHUSETTS GENERAL HOSPITAL, BOSTON, VOL. II, NO. 1; SELECTED PAPERS BY THE STAFF. Paper. Pp. 393, with illustrations. Boston, October, 1908.

MALARIAL FEVERS. By S. P. James, M.D., D.P.H., Major, Indian Medical Service. Edition 3. Paper. Pp. 94. Calcutta: Superintendent Government Printing, India, 1908.

BLOOD EXAMINATION IN SURGICAL DIAGNOSIS. By Ira S. Wile, M.S., M.D. Cloth. Pp. 161, with illustrations. Price $2. New York: Surgery Publishing Co., 1908.

EIGHTH ANNUAL REPORT OF THE NEW YORK STATE HOSPITAL FOR THE CARE OF CRIPPLED AND DEFORMED CHILDREN. 1908. Paper. Pp. 48, with illustrations.

ANNUAL REPORT OF THE ASYLUM FOR CHRONIC INSANE, Milwaukee County. 1908. Paper. Pp. 52, with illustrations.